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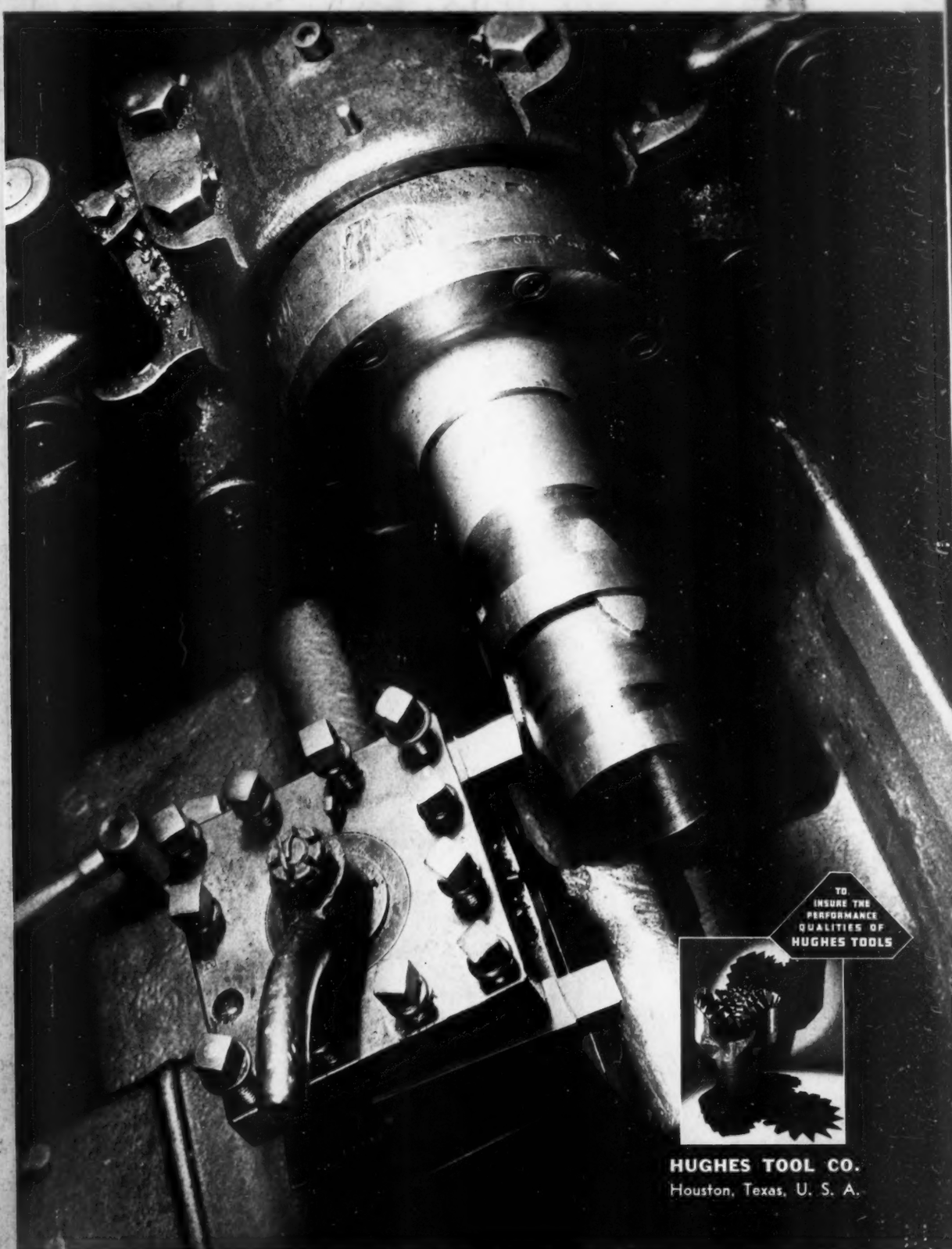

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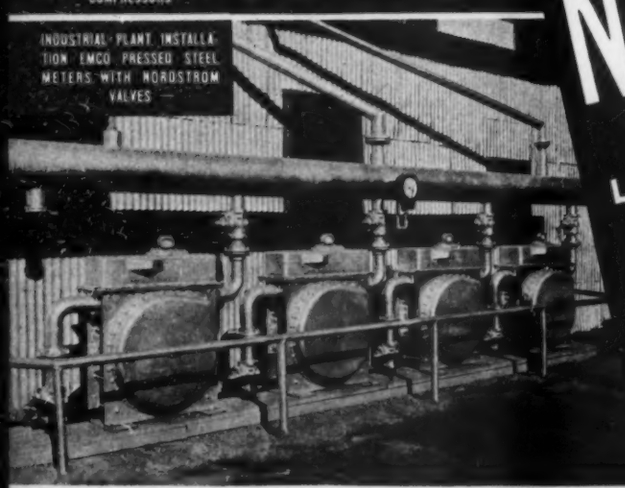

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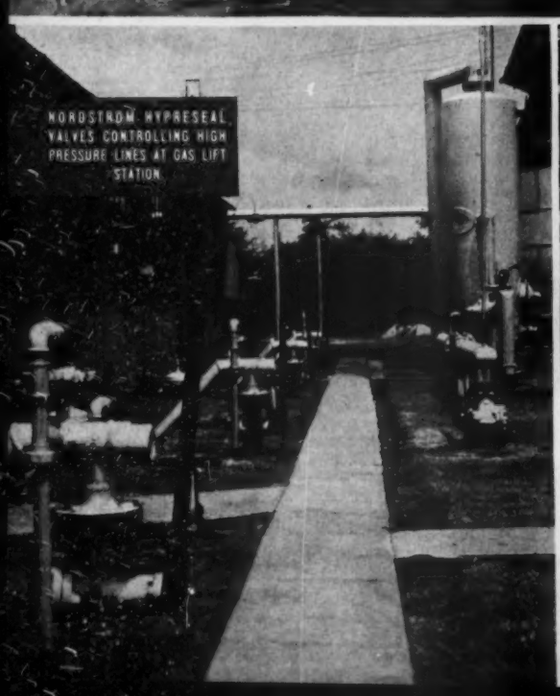

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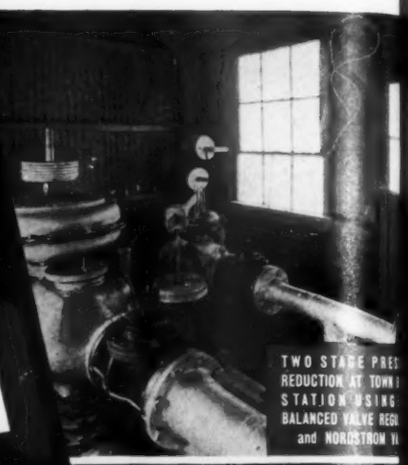

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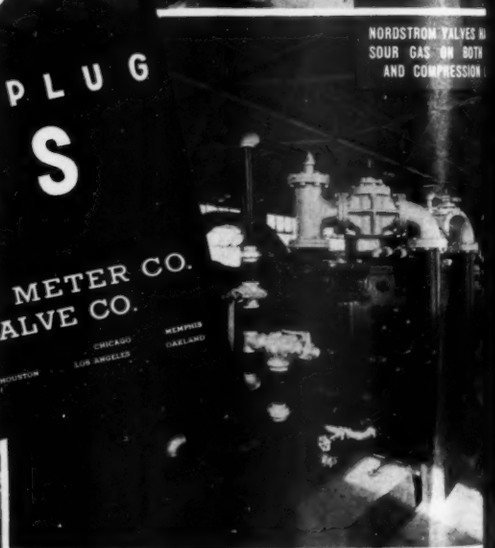

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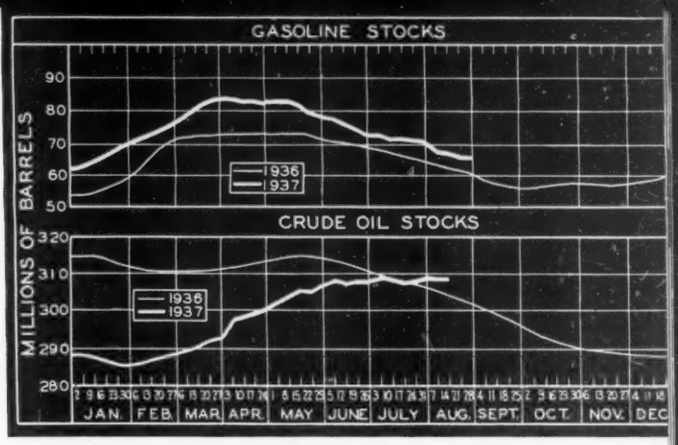


Motor Fuel Stocks Not Uniform

STATISTICIANS of the industry are hopeful that the new peak in daily crude oil output established last week will not be duplicated until some time next year when an increase in demand, apparently assured for 1938, will be able to absorb a domestic output of approximately three and three-quarter million barrels daily.

CRUDE PRODUCTION *3,735,393 barrels daily average—up 9,131 barrels.*

CRUDE STOCKS *308,737,000 barrels as of August 14—up 815,000 barrels.*

GASOLINE STOCKS *66,997,000 barrels as of August 28—down 263,000 barrels.*

REFINERY RUNS *3,425,000 barrels daily average past week—up 10,000 barrels.*

As explained in detail elsewhere in this issue, state allowables starting Wednesday call for a reduction of 150,000 to 200,000 barrels daily in national crude output. If this reduction materializes there is every reason to believe that additions to crude oil stocks which started early this year, will end. There probably will remain small areas with excess crude supplies. Observers, however, believe that these local conditions can be readily rectified just as soon as the national situation is in hand.

With lower crude output in prospect many are giving consideration to the refinery situation—particularly gasoline stocks. There have been signs of weakness in gasoline markets extending from tankcar to retail sales and some fear that this will bring general reductions in price levels later in the year.

Gasoline stocks at refineries and major terminals on August 21 were 5,108,000 barrels, or 9 per cent higher than on the corresponding date of last year. With more than a 10 per cent gain in export and domestic demand for motor fuels this increase in stocks, if equally distributed among the refining areas, would not be excessive.

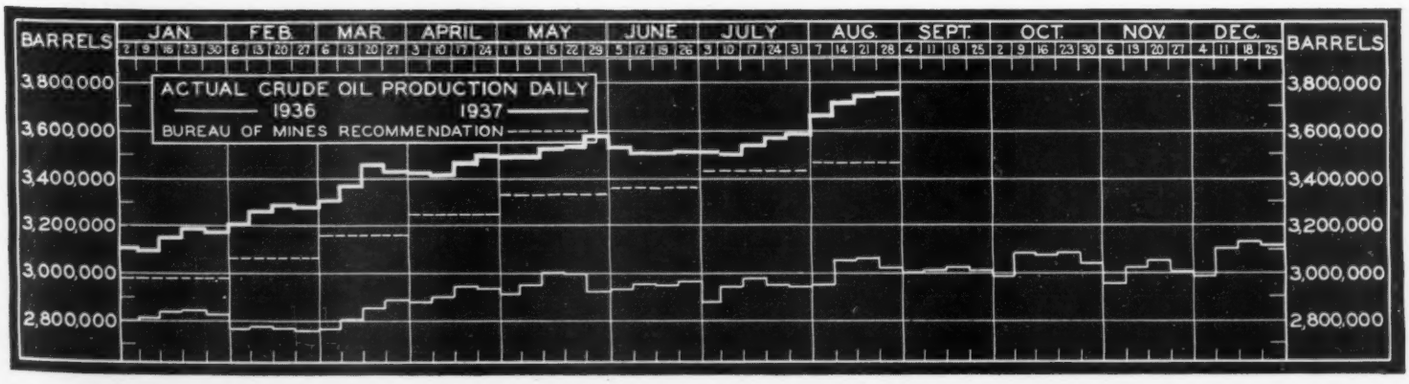
Unfortunately, this uniformity in stock increases is lacking. Gasoline stocks in California and the Louisiana Gulf Coast are about the same as last year despite the large gains in shipments. East Coast gasoline stocks have expanded 6 per cent and the Texas Gulf Coast, 9 per cent. In contrast, all of the inland refining centers have stock increases above the average. The gains over the same period last year are: Indiana, Illinois and Kentucky, 28 per cent; Mid-Continent, 23 per cent; Rocky Mountains 45 per cent, and Appalchain 16 per cent. These gains total approximately 5,000,000 barrels.

An exhaustive study of these data probably would establish the fact that one reason these stocks are now higher than needed is that coastal areas, which have enjoyed a record export market, have also taken domestic markets away from inland refiners. Those who have made a special study of the situation are inclined to view conditions as they are, and urge inland refiners to make whatever adjustments are necessary in their runs to prevent liquidation of stocks at this time and also keep the past year in mind in projecting 1938 operations.

Daily Average Production for Week

	Aug. 28, 1937	Bur. Mines Aug. est.	Aug. state allowables	Aug. 21, 1937
Oklahoma City	156,550	.....	.....	162,200
Fitts	93,750	.....	.....	97,550
Remainder of State	391,225	.....	.....	393,850
Total Oklahoma	641,525	633,400	633,400	653,600
East Texas	477,298	.....	.....	477,398
West Texas	245,100	.....	.....	242,750
North Central Texas	109,000	.....	.....	108,950
Texas Panhandle	85,749	.....	.....	87,650
East Central Texas	129,796	.....	.....	128,447
Gulf Coast—Texas	382,450	.....	.....	375,350
Southwest Texas	125,289	.....	.....	124,698
Total Texas	1,554,682	1,395,200	1,495,491	1,545,243
North Louisiana	88,425	.....	.....	86,800
Gulf Coast—Louisiana	175,300	.....	.....	176,300
Total Louisiana	263,725	253,900	264,550	263,100
California	668,500	612,800	612,800	674,250
Kansas	201,350	200,500	200,500	194,050
Arkansas	35,590	29,100	.....	33,560
Eastern Fields	129,750	121,900	.....	126,400
Michigan	47,621	39,900	.....	45,479
New Mexico	113,880	100,800	114,000	113,880
Rocky Mountain area	78,770	75,400	.....	76,700
Total United States	3,735,393	3,462,900	.....	3,726,262

Increase, 9,131 bbls. daily.



SPARKS FROM THE NEWS

SIZE PLUS PRICE

The flow from that surprise well in the Bradford field brings the top price of $2.82 per barrel. There are about seven gallons of Pennsylvania Grade lubricants in every barrel.

IN THE LEAD

Well completions for the year passed the 20,000 mark last week—more than the total of any single year for the 1931-1934 period. The entire year will establish a new 12-month record.

AYES HAVE IT

In early Rodessa days there were many arguments as to whether the field would ever produce 100,000 barrels daily. With the new Arkansas extension the ayes apparently will win.

OUTSIDE HELP

Reports indicate that union activities in the coal producing areas are creating a condition which strengthens the competitive situation of oil as fuel.

WRONG CONNECTION

The oil industry, 78 years old last week, has had its picture taken. A new movie release depicts the troubles encountered in laying the first pipe line. An engineer insists he identified a welded connection in the picture.

ENCOURAGEMENT

Followers of Oklahoma wildcats are encouraged. A Stephens County deep discovery flowed as high as 192 bbls. in one hour; a 500-bbl. well opened a pool in Tillman County and a Grant County outpost showed improved prospects for opening a Wilcox sand area.

LOOKING AHEAD

Many refiners are giving consideration to the 1938 needs of their customers. They see another increase in demand with better prospects for adequate crude supplies than last year.

MORE GAS

Drilling activity has increased rapidly in recent weeks in the southwestern Kansas gas area, with many new wells being drilled in Stephens, Grant and Haskell counties. The play has extended into Texas County, Oklahoma.

SEPTEMBER PROGRAMS

The principal oil producing states have adopted curtailment programs for September starting Wednesday, which if carried out should end increases in total crude oil stocks.

UP AND DOWN

After a steady climb of seven weeks in output, the crude producing branch of the industry now has the job of coming down about the same distance during September.

NEW RESERVES

Kansas and West Texas reports continue to be filled with new pools, new sands and successful extensions of existing production. The net results are new reserves.

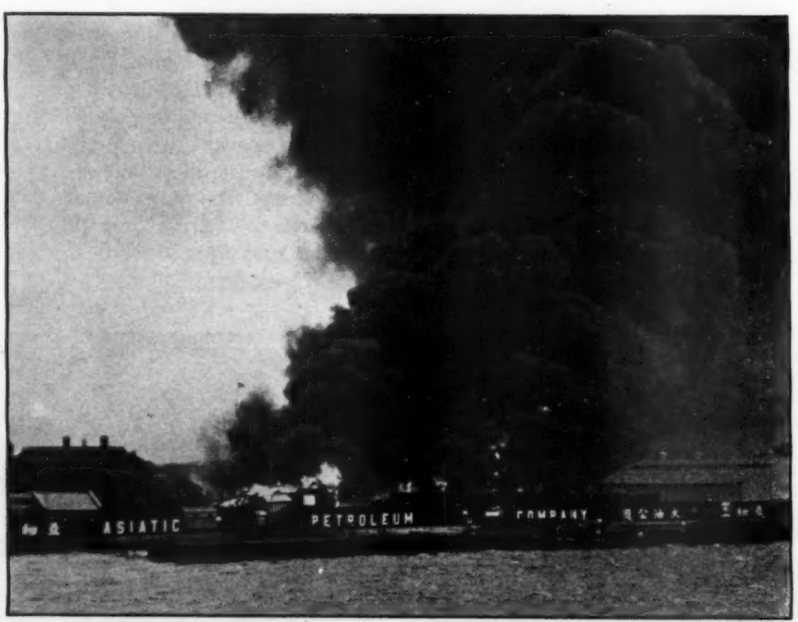
ASPIRIN OUTLET

The Illinois-Indiana-Kentucky play has spread to include an area about 150 miles square. Conservative operators are pointing out there is certain to be some headaches as well as oil in so large an area.

FORESIGHT

The Japanese are now using some of the fuel oil and other petroleum products they stored over a three-year period in preparation for an emergency that has arrived.

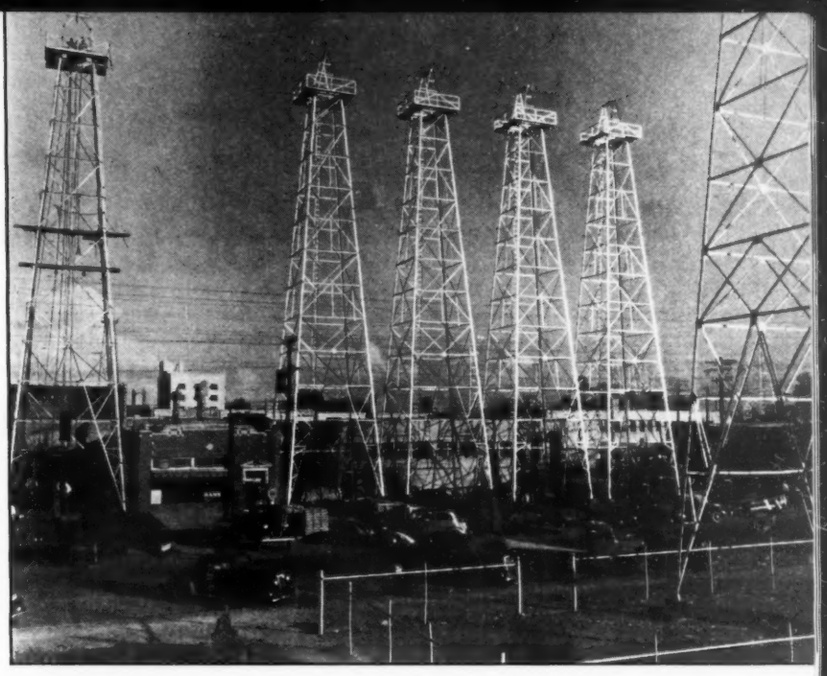
OIL TANKS WAR TARGET



Pictures, Inc.

The explosion which resulted when a bomb struck the Asiatic Petroleum Co. property on the Whangpoo River, Shanghai, China

States Cut September Allowables



ONE REASON THEY STILL HAVE PROBLEMS IN EAST TEXAS—Buildings erected in early boom torn down to provide Kilgore drilling sites

By L. G. E. BIGNELL

In an effort to reduce the volume of oil going to storage and provide for a fall reduction in demand, thus stabilizing the crude oil market, the six principal oil producing states have issued September allowable orders indicating a total reduction of 190,983 bbls. daily or 5.5 per cent less than the daily average output last week. These states—Oklahoma, Texas, Louisiana, California, Kansas and New Mexico—produce 92 per cent of the oil and their September production programs, if carried out, should end additions to aboveground storage.

The need for this reduction in daily production is clearly shown by a study of the figures for the week ending August 28 when 3,735,393 bbls. of oil were produced, a new high in production. This was 272,493 bbls. over the recommendations of the Bureau of Mines.

The accompanying table shows the September allowables for the six major producing states compared with the actual oil brought aboveground last week. It also includes the forecast of the Bureau of Mines which shows last week the industry produced an excess of 208,062 bbls. In the right-hand column of the table the states' August allowables are tabulated and the production for the week of August 28 indicates 112,921 bbls. daily of excess oil was produced.

All available data emphasize the need of a substantial cut in oil produced in line with seasonal requirements. There is the additional fact that an average of approximately 100,000 bbls. of crude oil daily has been going to storage over the past seven months. The summer demand has been taken care of and most refiners have on hand sufficient working stocks. It is predicted a further reduction in allowables will be made in October to further adjust to the seasonal conditions.

From the figures Oklahoma has reduced the daily production about 41,525 bbls. below the actual oil produced during the week of August 28 and 33,600 bbls. below the recommendations of the Bureau of Mines for September. This figure is also 33,400 bbls. below the August state allowable.

In Texas the commission has reduced the daily allowable 112,948 bbls. below the production for the week of August 28 but exceeds the Bureau of Mines forecast by 28,134 bbls. However, the September allowable is 53,757 bbls. below the August allowable.

Louisiana has not seen fit to make any reduction in the daily allowable. In fact, the new order is an increase of 2,770 bbls. over the actual production for the week of August 28 and 17,595 bbls. more than the bureau's forecast for September. The new order also shows an increase of 945 bbls. over the state's August allowable.

The other three states have all shown reductions below the reported production of August 28, although California will follow the bureau's recommendations of 638,200 bbls. daily for September, which is an increase of 25,400 bbls. over August allowables.

In Kansas there was an overage of about 4,650 bbls. daily and that volume of oil was deducted from the Bureau of Mines recommendations of 200,900 bbls., making the new September allowable 196,350 bbls., which is also below the August 28 rate of production and the August allowable.

New Mexico has not shown much change, having reduced the September allowable only 2,880 bbls. below the August 28 production rate and 3,000 bbls. below the August allowables. The new order calls for 111,000 bbls. daily, and this is 8,600 bbls. in excess of Bureau of Mines' forecast for September.

Considering these six states as a group, it is found that they have reduced the September allowables 190,983 bbls. below the August 28 rate of production, but are still 17,079 bbls. over the Bureau of Mines September forecast. On the other hand the new allowables will be 68,062 bbls. below the August allowables.

Oklahoma Meeting

After a full discussion on Thursday of the production rate for the Oklahoma oil fields by the major purchasers of oil and producers of crude with William J. Armstrong, chief conservation officer for the Oklahoma Corporation Commission presiding, the commission issued an order on August 27 cutting the total oil to be produced during September about 50,000 bbls. below August's actual production. This will place the total oil for the fields of this state at 600,000 bbls. daily or about 33,600 bbls. below the recommendations of the Bureau of Mines.

In issuing this order Reford Bond, chairman of the commission, stated: "We felt justified in reducing the allowable this much because the evidence clearly showed there is too much oil being produced here and elsewhere so I think we are only doing our part in making this reduction."

In arriving at the 600,000-bbl. figure Mr. Armstrong had made a very careful study of conditions in every field and presented his findings in the form of a table from which the following final figures were computed:

Flow in the Oklahoma City Wilcox zone was fixed at 9 per cent, the barrelage being cut from 128,000 to 113,516 bbls. daily. Mr. Armstrong did not recommend to the commission a proposal to "freeze" the allowable underproduction next month.

Only four fields in the class B group are on percentage basis for September; they are: Billings-Wilcox, at 6 per cent for 7,043 bbls. daily; Jesse at 5.5 per cent for 2,783 bbls.; Keokuk Falls, 9.7 per cent for 6,783 bbls.; Lucien at 8.2 per cent for 13,174 bbls. Total for the class was cut from 137,100 bbls. to 134,707 bbls.

All fields in the class C group were reduced, the average being 13,044 per cent. Percentage for the Moore field will be figured after September 1 when bottom-hole pressure tests are made; the field was allowed 11,304 bbls., a reduction from 13,000 bbls.

Other fields: North Bethel, 8.4 per cent for 2,609 bbls.; South Britton, 5 per cent for 1,659 bbls.; Crescent, 3.4 per cent for 8,696 bbls.; Edmond, 3.75 per cent for 16,522 bbls.; Fitts-Hunton,

(Continued on Page 26)

PAST, PRESENT AND FUTURE IN OIL PRODUCTION

State—	States' September allowables	Week ending August 28	September Bureau of Mines forecast	States' August allowables
Oklahoma	600,000	641,525	633,600	633,400
Texas	1,441,734	1,554,682	1,413,600	1,495,491
Louisiana	265,495	263,725	247,900	264,550
California	638,200	662,500	638,200	612,800
Kansas	196,250	201,350	200,900	200,500
New Mexico	111,000	113,880	101,400	114,000
Totals	3,252,679	3,443,662	3,235,600	3,320,741

All data in barrels per day.

Future Production from Wilcox Zone in Oklahoma City Field

By W. V. HOWARD
Consulting Geologist, Tulsa

Estimates of the future of the Oklahoma City field range from statements that the field is "shot" and will produce less than 50 per cent of its present production within a year to statements that it will continue to produce for 50 years.

With over 600 wells still producing from the Wilcox sand, few have taken the trouble actually to assemble the information necessary to make a reasoned prediction. In this article, the writer attempts to present the facts of past production and to point out certain very definite conclusions that can be drawn.

Past Production

For ease in grasping the details of the field's production records, the field has been divided into 36 areas, based upon section lines. These are described in Table 1, which also shows total production for each area up to July 31, 1937. Figures have been taken from the Corporation Commission's reports.

From this table two conclusions may be drawn. In the first place, areas 1 to 8, inclusive, have been developed during the past two years and their total production to date is correspondingly less than that of the older areas. However, in the older areas, it may be noted that of the 12 areas having closer than average spacing, 9 produced more than average per well and 10 produced more than average per acre. On the other hand, of the 16 areas having less than average well density, only five produced more per well and one produced more than average per acre. This would seem to indicate the advisability of close spacing in a field of this type. This conclusion is, however, not valid, for the simple reason that those areas which promised less than average production would normally not be so closely drilled as the more prolific spots. Moreover, the two most densely drilled areas will show up much less favorably in the future than they do now because they have been much more completely depleted than the other areas. In the NW section 2-11-3, 30 of the 47 wells have been abandoned in the Wilcox, and in the SE of Section 22, 41 of the 54 wells have been either abandoned or plugged back to higher sands. No other areas show such a high proportion of early abandonments, except the SW of section 2 (area 17) which is entirely depleted.

A much more significant conclusion is the fact that production has borne a very close relation to structure, although not exactly what might have been expected. This relation shows up in areas 9, 10 and 11; 12, 13 and 14; and in 15, 16 and 17. In the three groups, the highest areas have produced less than the intermediate and lower areas. The intermediate areas have a much better record than the low areas. This relation is constant throughout the field and indicates clearly the result of producing a field in which there is a relatively ineffective water drive and in which a gas cap develops. In the new area, the first wells to fall below the minimum allowable lie on the crest of the structure. In the old area, the zone in which the wells are still producing more than the minimum allowable lie along an axis which is slightly below the center line between the edge of the Wilcox and the original water level.

Abandonments

Table 2 shows the abandonments prior to November 1, 1935, with the estimated formerly productive area depleted before that date.

These early abandonments obviously include a number of edge wells, but they also show two tendencies which have continued up to the present time, namely, the rapid depletion of wells in closely drilled areas and the tendency for the highest wells to go off production.

TABLE 2—AREA DEPLETED BEFORE NOVEMBER 1, 1935

Area	Wells abd.	Prod.	Bbls./well	Area	Bbls./acre
10	1	539,881	539,881	0	
12	8	1,148,542	143,565	40	28,714
14	10	2,640,749	264,075	30	88,025
15	4	319,532	79,883	30	10,651
16	3	161,876	53,959	20	8,094
17	2	263,296	131,648	20	13,165
18	3	402,362	134,121	15	26,824
19	1	1,276	1,276	15	85
20	1	155,084	155,084	10	15,508
21	1	80,496	80,496	5	16,099
24	7	328,839	46,977	35	9,395
25	4	579,874	144,969	20	28,994
26	20	3,862,657	193,133	25	154,506
33	1	*100,000	100,000	20	5,000
34	4	*240,000	60,000	40	6,000
	70	10,824,464	154,635	325	33,306

*Areas on lease basis, estimated.

Table 3 shows the abandonments in the Wilcox sand between November 1, 1935, and July 31, 1937.

Table 4 shows the total production of those wells which are still on production. The accompanying map shows the outline of the original Wilcox sand area and the present producing area. Contours have been drawn on this map, which was taken from Report of Investigations No. 3,330 of the U. S. Bureau of Mines, representing the 2,000 and 6,000 bbls. per month limits. This map clearly shows that the areas of greatest abandonment are either the most densely drilled areas or the areas where the base of the Wilcox sand is highest. A third group of abandonments is made up of those edge wells which were drilled down structure near the water level.

Again omitting areas 1 to 8, inclusive, we find that of the 14 areas having wider spacing than average, eight are in the south end of the field and one lies east of the fault, that is, in admittedly poorer than average areas.

Basis for Estimate of Future Production

There are a number of methods of estimating future production. Of these, one of the best is on the basis of decline curves. However, proration has greatly affected decline curves in Oklahoma City, and, although the field is virtually off proration at the present time there are still certain difficulties in using decline curves. One of these is that of the 17 areas whose average production has been below the minimum allowable, five show an increase in production over the period November, 1935, to January, 1936. On the average, wells having a production of between 100 and 150 bbls. per day during that period have declined at the rate of 10 per cent per year. Those between 150 and 200 bbls. have declined at an average rate of

TABLE 1—TOTAL PRODUCTION, WILCOX ZONE, OKLAHOMA CITY TO JULY 31, 1937

Area	Location—	Production	Wells	Bbls./well	Area	Bbls./acre	Acres/well
1	S½ 15-12-3	*1,899,588	29	65,503	90	21,107	3 1
2	N½ 22 and NW 23	5,113,507	40	127,838	180	28,408	4 5
3	S½ 22-12-3	9,821,378	42	233,852	200	49,107	4 8
4	SW 23-12-3	5,530,632	20	276,532	80	69,133	4 0
5	N½ 27-12-3	3,462,513	26	140,097	150	23,083	5 8
6	NW 26-12-3	1,227,233	10	122,723	50	24,545	5 0
7	S½ 27-12-3	1,176,848	25	47,073	160	7,355	6 4
8	N½ 34-12-3	5,874,723	32	183,585	200	29,374	6 4
9	SW 34-12-3	5,061,656	12	421,805	40	126,541	3 2
10	SE 34-12-3	24,929,961	38	656,052	160	155,812	4 2
11	SW 35-12-3	2,936,337	11	266,940	80	36,704	7 3
12	NW 3-11-3	17,123,476	32	535,109	150	114,156	4 7
13	NE 3-11-3	26,080,088	28	931,432	160	163,001	5 7
14	NW 2-11-3	23,601,719	47	502,164	125	188,814	2 7
15	SW 3-11-3	6,423,709	19	338,090	150	42,625	7 4
16	SE 3-11-3	6,420,462	25	256,818	160	40,128	6 1
17	SW 2-11-3	1,157,039	7	165,273	60	19,284	8 6
18	NW 10-11-3	14,895,394	39	381,933	160	93,096	4 1
19	NE 10-11-3	14,415,073	27	537,595	140	103,679	5 2
20	SW 10-11-3	6,788,338	21	323,254	100	67,883	4 8
21	SE 10-11-3	8,069,888	15	537,992	100	80,699	6 7
22	N½ 15-11-3	8,497,619	21	404,639	190	44,724	9 0
23	S½ 15-11-3	10,248,580	29	353,399	130	78,835	4 5
24	N½ 22-11-3	2,375,716	19	125,038	100	23,757	5 3
25	SW 22-11-3	2,840,051	13	218,465	60	47,334	4 6
26	SE 22-11-3	15,618,554	54	289,232	140	111,561	2 6
27	NE 27-11-3	3,547,590	15	236,506	90	39,418	6 0
28	NW 26-11-3	3,599,246	11	327,204	90	39,992	8 2
29	SW 26 and NW 35	1,841,408	9	204,601	90	20,461	10 0
30	SE 26 and NE 35	3,386,156	9	376,290	150	22,774	16 7
31	SW 25 and W½ 36	4,584,557	18	254,698	240	19,102	13 3
32	E½ 36-11-3	4,453,139	15	296,876	170	26,195	11 3
33	W½ 31-11-2	6,855,484	14	489,677	170	40,315	12 1
34	SE 31 and NE 6-10	4,840,455	17	284,733	170	28,473	10 0
35	SE 32-11-2	477,203	3	159,068	40	11,981	13 3
36	E of fault	4,692,347	15	312,823	200	23,462	13 3
		269,967,667	807	334,532	4,725	57,136	5 9

*Includes Upper Simpson Dolomite.

12 per cent per year. These rates cannot be applied to individual wells or leases, however.

In appraising a number of properties in the field, I have found that when a well gets down to the 50-bbl. per day point, one or two things may happen. It may have a short period of rather erratic production with a total yield of about 7,500 bbls., or it may be reconditioned and start off at the rate of up to several hundred barrels per day. Generally, the structurally higher wells will follow the former course.

TABLE 3—WELLS ABANDONED IN WILCOX ZONE BEFORE JULY 31, 1937

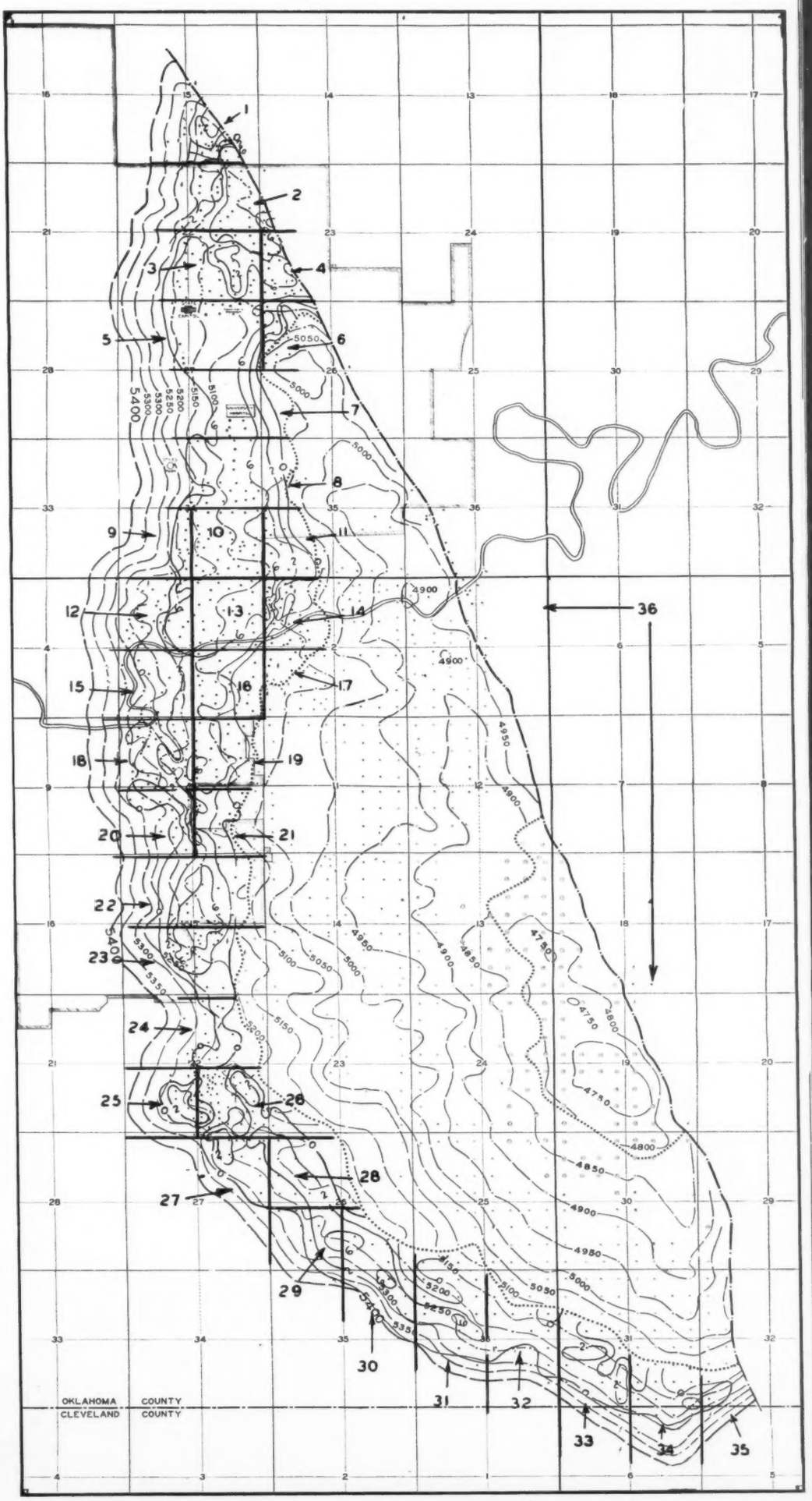
Area	Wells abd.	Prod.	Bbls./well	Area	Bbls./ acre
1	4	275,260	68,815	15	18,351
6	3	241,260	80,636	15	16,127
8	1	8,454	8,454	15	564
10	1	689,264	689,264	5	137,853
12	2	780,820	390,410	10	78,028
13	1	573,245	573,245	10	57,324
14	20	8,544,991	427,250	55	154,454
15	1	*150,000	150,000	10	15,000
16	10	2,201,215	220,122	50	44,024
17	5	893,743	178,749	40	22,344
18	8	2,074,164	259,258	35	59,262
19	5	2,369,804	473,961	25	94,798
20	5	985,709	197,142	20	49,285
21	3	308,031	102,677	15	20,534
22	4	174,316	43,579	30	5,811
24	1	115,778	115,778	15	7,719
26	11	3,161,934	269,267	25	126,477
27	2	150,197	75,099	15	10,013
29	4	645,227	161,307	40	16,131
31	3	*355,000	118,333	40	88,750
32	3	*420,000	140,000	50	84,000
33	2	*300,000	150,000	20	15,000
34	6	*2,000,000	333,333	60	33,333
35	1	*125,000	125,000	15	8,333
36	3	590,329	197,110	15	39,349
	109	. . . . .	258,111	645	43,619

*Estimated. Areas on lease basis. Wells with no potential considered as depleted.

Various methods of estimating future production by means of potential decline have been suggested. These can easily be shown to be inapplicable as potential decline is relatively meaningless unless potentials were taken at different periods using the same productive methods and under uniform conditions. At the present time, I believe that the evidence shows that wells having a potential of over 1,000 bbls. per day could actually produce from 10 to 15 per cent of their potential. The ratio between allowables and actual production indicates that there is little use in considering potential from this point on.

Of all the different methods, the favorite is the volumetric method. Actually, this method should be used only when no other is available. The failure of this method when applied to Oklahoma City wells can be demonstrated by considering the NW quarter of section 2 which is by no means depleted. The average thickness of the Wilcox sand in this area is about 50 feet and it has produced 188,814 bbls. per acre or 3,776 bbls. per acre foot. Since an acre foot contains 7,780 bbls., use of the volumetric formula gives us to date, 100 per cent saturation, 100 per cent recovery and 49 per cent porosity. As there is still a considerable quantity of oil to be produced, the only factor which can be increased is the porosity, which is far higher than any person would place it now. Also no qualified person would give any area 100 per cent recovery. Obviously, a method which does not take into consideration such factors as drainage could only be used in a field where all wells were completed at the same time and were operated so as to produce only that oil which lay nearer to them than to any other well. Neither of these conditions applied at Oklahoma City.

The best method of evaluating the future pro-



Contours in black show outlines of equiproduction zones in Wilcox sand area of the Oklahoma City field. (Zones represented: 0, 2,000 and 6,000 bbls. per month, as of June, 1937.) Numbers on map refer to those used in article to designate various areas

duction from this field seems to be to study the record for the past year or so and attempt to apply it to the future. Table 5 shows the production from those wells which are now on production during the period November 1, 1935, to June 30, 1937. As new wells were being drilled through this period, this production has been reduced to a basis of actual production per well per month.

From this table, it can be seen that in some cases, decline curves can be constructed. However, to apply an average for the whole field to an individual area would imply that there was an average area. A glance at the figures will show that there are few such areas. In other cases, the figures must be interpreted. In certain cases, particularly in areas 10 and 13, the extremes are both larger than the mean. This is explained by the fact that both at the beginning and the end of the period under consideration, allowables were greater than in the summer of 1936. Hence, in certain areas, proration was effective during this period.

In area 14, the mean is greater than either of the extremes. Examination of the monthly records for any area up structure will show that at a period of, say six months to a year prior to the period of abandonment of a well, production rises sharply. This would undoubtedly apply to area 14, and we can assume that these warning signals were given at some time during 1936 or the winter of 1937. This may also be the case in areas 11, 24 and 33, but it cannot explain the increases in areas 20 and 29, which are down on the structure.

Also in the northern end of the field, it is difficult to draw a decline curve as production is erratic. A possible method of arriving at a reasonable figure for future production is to use a combination of Table 5 and the areal distribution of zones of production.

Area-Factor Method of Estimating Future Recovery

To fit in with conditions as they exist in Oklahoma City, maps were prepared showing by means of contours the limits of the 6,000, 2,000 and zero-barrel per month areas. A factor was derived by assuming arbitrarily that production per acre above the 6,000-bbl. limit would be double that between the 6,000 and 2,000-bbl. contours and six times that between the 2,000 and zero-barrel contours. The area-factor at any given date is the sum of the acreage in the three zones, multiplied by 6, 3 and 1, respectively. For subsequent periods, the area factor was considered as having a uniform decline and when the decline in any area gave it a negative area-factor, this amount was deducted from the adjacent areas affected by convergence of the contours. It is believed that this method allows for abandonments as well as declining production.

TABLE 4—TOTAL PRODUCTION OF WILCOX SAND WELLS, STILL ON PRODUCTION, JULY 31, 1937

Area	Production	Wells	Bbls./well	Area	Bbls./acre	Acres/well
1	*1,624,328	25	64,973	75	21,658	3.0
2	5,113,507	40	127,838	180	28,408	4.5
3	9,821,378	42	233,852	200	49,107	4.8
4	5,530,632	20	276,532	80	69,133	4.0
5	3,462,513	26	140,097	150	23,083	5.8
6	985,325	7	140,761	35	28,252	5.0
7	1,176,848	25	47,073	160	7,355	6.4
8	5,866,269	31	189,234	185	31,710	6.0
9	5,061,656	12	421,805	40	126,541	3.3
10	23,700,816	36	658,356	155	152,908	4.3
11	2,936,337	11	266,940	80	36,704	7.3
12	15,194,114	22	690,642	100	151,941	4.5
13	25,506,843	27	944,698	150	170,046	5.6
14	12,415,979	17	730,352	40	310,399	2.4
15	5,954,177	14	425,298	110	54,128	7.9
16	4,057,371	12	338,114	90	45,082	7.5
17	0	0	0	0	0	0
18	12,418,868	28	443,530	110	112,899	3.9
19	12,143,993	21	578,285	100	121,440	4.8
20	5,647,545	15	376,503	70	80,678	4.7
21	7,681,361	11	698,306	80	96,017	7.2
22	8,323,303	17	489,606	160	52,021	9.4
23	10,248,580	29	353,399	130	78,835	4.5
24	1,931,099	11	175,545	50	38,622	4.5
25	2,260,177	9	251,131	40	56,504	4.4
26	8,593,963	23	373,651	90	95,486	3.9
27	3,397,393	13	261,337	75	45,299	5.8
28	3,599,246	11	327,204	90	39,992	8.2
29	1,196,181	5	239,236	50	23,924	10.0
30	3,386,156	9	376,228	150	22,574	16.7
31	4,229,557	15	281,970	200	21,148	13.3
32	4,033,139	12	336,095	120	33,610	10.0
33	6,455,484	11	586,862	130	49,658	11.8
34	2,600,455	7	371,494	70	37,149	10.0
35	352,203	2	176,102	25	14,088	12.5
36	4,102,018	12	341,835	185	22,173	15.4
	231,008,714	628	367,848	3,755	61,520	6.0

*Includes Upper Simpson Dolomite.

TABLE 5—PRODUCTION RECORD, NOVEMBER 1, 1935, TO JUNE 30, 1936, OF WELLS NOW ON PRODUCTION

Area	Production	Wells	Bbls. per well	Area	Bbls. per acre	Prod. per well per month: Average	Nov., 1935 to Jan. 1936	Apr., 1937 to June 1937
1	1,502,422	19	79,075	75	20,032	7,054	.....	6,981
2	4,765,629	40	119,141	180	26,476	9,326	.....	6,081
3	9,276,119	42	220,860	200	46,381	16,302	.....	12,449
4	5,232,831	20	261,642	80	65,410	18,107	35,534	11,346
5	3,159,898	26	121,534	150	21,066	14,697	.....	13,929
6	946,867	7	135,267	35	27,055	7,699	.....	7,191
7	925,474	18	51,415	160	5,784	8,413	.....	10,351
8	4,813,345	31	155,269	185	26,018	10,816	22,080	12,344
9	1,955,487	12	162,124	40	48,887	10,238	11,088	9,402
10	6,829,363	36	189,705	155	44,060	9,632	13,195	11,503
11	867,973	11	78,816	80	10,849	3,946	3,682	4,571
12	2,649,790	22	120,445	100	26,498	6,022	9,745	6,451
13	5,042,249	27	186,750	150	33,615	9,338	13,730	13,461
14	1,712,350	17	100,726	40	47,809	5,034	4,092	4,172
15	1,052,212	14	75,158	110	9,566	3,758	4,088	3,126
16	931,032	12	75,916	90	10,346	3,879	4,356	3,037
17	0	0	0	0	0	0	0	0
18	1,657,870	28	59,209	110	15,072	2,960	3,109	2,930
19	1,557,295	21	75,109	100	15,773	3,755	4,662	3,493
20	681,958	15	45,464	70	9,742	2,273	2,282	2,526
21	1,058,803	11	96,255	80	13,260	4,813	6,448	4,616
22	2,127,783	17	125,163	160	13,299	6,258	8,246	6,152
23	2,570,500	29	88,638	130	19,773	4,432	5,257	2,554
24	546,826	11	49,711	50	10,936	2,486	2,779	2,533
25	886,655	9	98,517	40	22,166	4,926	5,908	3,781
26	1,900,419	23	82,627	90	21,116	4,131	5,086	3,200
27	861,701	13	66,285	75	10,689	3,314	4,263	2,834
28	1,043,808	11	94,892	90	11,998	4,741	4,928	4,461
29	340,948	5	68,190	50	6,819	3,409	3,858	3,553
30	987,618	9	109,745	150	6,584	5,487	6,967	3,854
31	513,696	15	34,246	200	2,568	1,712	2,079	1,667
32	256,228	12	21,352	120	2,135	1,068	1,905	838
33	779,758	11	70,887	130	4,998	3,544	3,285	3,800
34	265,211	7	35,019	70	3,789	1,894	1,640	2,030
35	19,591	2	9,796	25	784	490	915	516
36	1,619,536	12	134,961	185	8,754	6,478	16,388	2,709
	71,359,425	615	116,193	3,755	19,004	.....	.....	.....

TABLE 6—ESTIMATED FUTURE PRODUCTION, WILCOX SAND AREA, OKLAHOMA CITY FIELD

Area	Prod.	Wells	Per well	Area	Per acre
1	*1,802,120	25	72,008	90	20,024
2	5,361,505	40	134,035	180	29,786
3	13,034,575	42	310,347	200	65,173
4	4,498,736	20	224,937	80	56,234
5	12,453,440	26	478,978	150	83,023
6	460,888	7	65,841	35	13,168
7	7,346,450	25	293,868	160	45,915
8	15,403,312	31	496,881	185	83,261
9	2,903,050	12	268,421	40	72,551
10	20,641,635	36	573,378	155	133,172
11	1,106,421	11	100,584	80	13,830
12	4,059,010	22	184,500	100	40,590
13	18,160,940	27	672,627	150	121,073
14	402,935	17	23,702	40	10,073
15	1,240,909	14	88,636	110	11,281
16	973,277	12	81,106	90	10,814
17	0	0	0	0	0
18	1,866,475	28	66,660	110	16,950
19	1,210,516	21	57,644	100	12,105
20	690,520	15	46,035	70	9,865
21	438,359	11	39,851	80	5,479
22	2,804,510	17	164,971	160	17,528
23	1,821,438	29	62,804	130	14,011
24	194,239	11	17,564	50	3,885
25	349,548	9	31,777	40	8,739
26	1,878,397	23	81,669	90	20,871
27	594,715	13	45,747	75	7,930
28	955,482	11	86,962	90	10,616
29	287,512	5	57,502	50	5,750
30	767,585	9	85,287	150	5,117
31	590,564	15	39,371	200	2,953
32	241,023	12	20,085	120	2,034
33	514,937	11	46,812	130	4,681
34	306,300	7	43,757	70	4,376
35	18,256	2	4,128	25	730
36	375,101	12	33,758	185	2,028
	125,684,692	628	200,134	3,755	33,471

*Includes Upper Simpson Dolomite.

To obtain the production for the next 20-month period, the average production per well per month was multiplied by 20 (months) and the number of wells and the ratio between the average area-factor for the next 20 months divided by the average area-factor for the preceding 20 months. This was carried on to estimated depletion of the field, with adjustments in each area-factor depending on depletion of the adjacent areas.

Table 6 shows the estimated future production of the different sections to depletion. Table 7 presents estimated ultimate recovery for each section and for the Wilcox zone as a whole.

Summary

Tables 6 and 7 show the concentration of the bulk of future production from the center of section 3 northward. The influence of late drilling and consequent partial depletion by drainage is seen in this zone where the area around the University Hospital has a smaller estimated ultimate recovery than equally well-located areas both to the south and to the north.

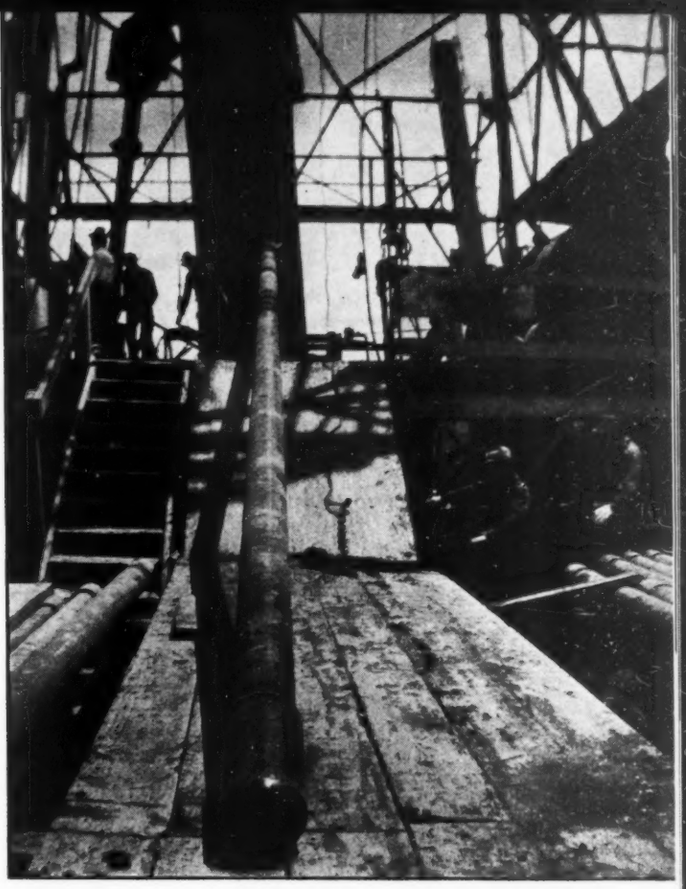
Of the 12 areas having a greater estimated ultimate production than 100,000 bbls. per acre all but two have denser well spacing than the average of the field as a whole. This does not indicate that if the remainder of the field had been so densely drilled it would have yielded proportionately higher recoveries. This is best shown by comparing the two most prolific sections in the field, namely, the SE of section 34 and the NE of section 3. Here the yield per acre is practically the same, although the former quarter section contains 10 wells more than the latter. The result of this closer drilling appears only to be that the average recovery per well in the densely drilled area is about 380,000 bbls. less than in the less densely drilled area. In both areas approximately half the wells are under lease operation so that greater efficiency cannot necessarily be claimed in the case of the quarter section having a greater production per well.

The two most densely drilled areas, namely, the

(Continued on Page 26)

Longest, Heaviest String of 7⅝ Inch Casing Ever Run

By F. L. SINGLETON



Pulling up first joint of 7⅝-inch 43-pound pipe preparatory to running to bottom of hole at 11,342 feet

HOUSTON, Tex., Aug. 30.—The longest and heaviest string of 7⅝-inch casing ever run was successfully cemented the past week by the Continental Oil Co. in No. 1 Brookshire in the Abbeville field, Vermilion Parish, Coastal Louisiana. The casing was run for protection and was cemented on bottom at 11,342 feet in the record time of 14 hours. Plug was scheduled to be drilled during the week preparatory to drilling below 12,000 feet where commercial production has been indicated by a previously drilled 12,000-foot hole.

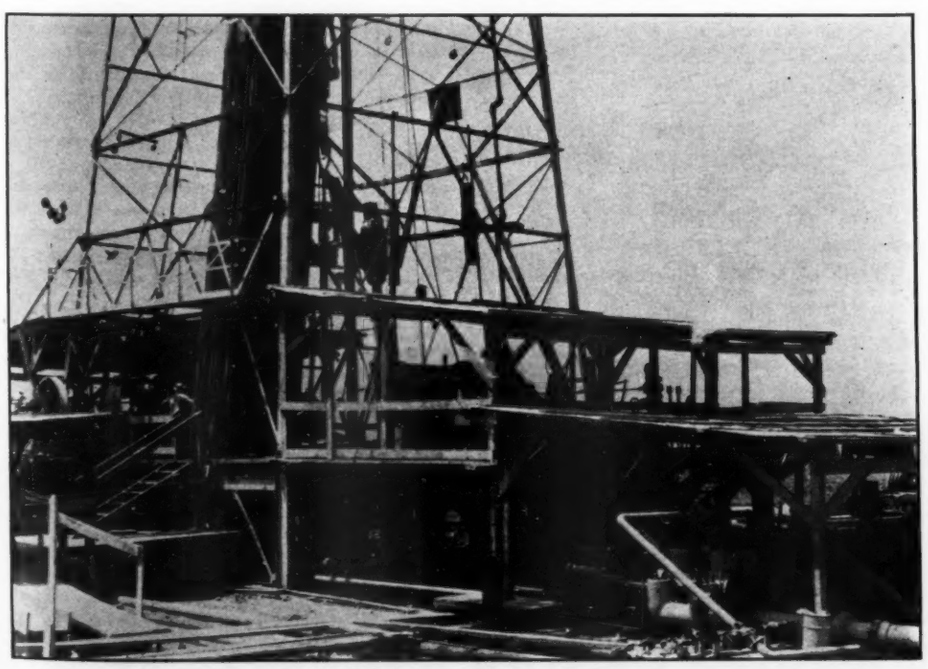
The feature was that the casing was cemented without difficulty in the greatest amount of open hole on record. This is an especially interesting achievement in mud-conditioning and drilling, and marks another step in the advancement of deeper exploration. The last string of surface pipe (13⅜-inch) was cemented at 2,175 feet making a total of 9,167 feet of open hole. Drilling will be resumed with 4½-inch drill stem which is scheduled to make No. 1 Brookshire the fourth test along the Gulf Coast that has been drilled below 12,000 feet this year. The other wells are at Lirette, Horseshoe Bayou and Abbeville which are producing at plugged back depths of 11,000, 10,000 and 7,600 feet, respectively.

The casing was made up of 4,000 feet of 7⅝-inch O.D. 43 Grade D special made external upset casing with 7,342 feet of 34-pound Grade D threaded casing on top, making a total load of 421,628 pounds which is one of the heaviest strings ever handled. The record for the longest string of 7⅝-inch casing was previously held by Texas Co. No. 1 Horseshoe Bayou in St. Mary Parish, while the longest string was 7-inch casing cemented at 12,101 feet by Humble Oil & Refining Co. at Lirette in Terrebonne Parish.

Setting Time

The 14-hour setting time included running in, welding the lower 10 joints (400 feet) and mixing and pumping the cement. The pipe was started in the hole at 2:30 p.m., August 24, and the cement plug hit bottom at 4:30 a.m., August 25. Fifteen hundred sacks of cement were used to fill the annular space behind the pipe. The cement was mixed and pumped down by two Halliburton cementing trucks in the record time of 52 minutes. The two 20-inch cementing pumps were started at 2:57 a.m. and got returns in two minutes after building up 2,500 pounds of pressure. The temperature of the mud was 132° F. At 3:20 cementing was started at the rate of 52 sacks per minute. At 3:54 the cement was started in the hole under a fluid movement of 1,400 pounds and the plug hit the float at 4:13 and circulation was broken at 900 pounds. The pipe was handled by a special casing crew as well as the drilling crew and no lost time or trouble was encountered.

The present depth was drilled in a total elapsed time of 84 days. The well was spudded June 30. Surface casing consisting of 250 feet of 18⅝-inch casing was cemented with 300 sacks and 2,175 feet of 13⅜-inch was cemented with 1,000 sacks. A directional survey made at 11,310 feet showed the hole to be only 2 degrees off vertical. From the geological data obtained by drilling the first deep hole, the operators were acquainted with the subsurface features and very little coring was required. All cores taken below 7,500 feet were recovered with wire line equipment with which it was possible to come out of the hole within several minutes. Two Schlumberger surveys were taken, one below 9,400 feet and the other to the total depth. Included in the drilling time was one fishing job at 10,904 feet which was cleared up with only one trip.



Rig used, showing double drawworks and the three large mud pumps

Equipment Used

Drilling was done under contract by Loffland Brothers using a large double drawworks equipped with a 14 by 14-inch engine and a 12 by 12-inch engine for the auxiliary drawworks. The mud was handled by three compounded slush pumps, one being 14 by 7½ by 18-inch and the other two being 15 by 8½ by 20-inch. The derrick, 136 feet high with a 30-foot base, is on an 8-foot steel substructure. Steam power is provided by four 125-hp. boilers.

Continental Oil Co. exploration at Abbeville was the forerunner of deeper exploration throughout the Gulf Coast. The area is approximately 6 miles southwest of the town of Abbeville, centering around section 20-12s-3e in the northern part of the parish. The geophysical picture of the area was confirmed in March of this year by the company's No. 1 O. C. Hebert several hundred feet due west of No. 1 Brookshire which was completed for a distillate producer at a plugged back

depth through perforated casing at 7,666-75 feet.

No. 1 O. C. Hebert was the first test along the Gulf Coast to be drilled below 12,000 feet and the favorable showings encountered below 11,000 feet were instrumental in the drilling of a second well. This test was spudded in April 10, 1935, and reached a depth of 11,732 feet where 5 feet of sand showing oil and gas was encountered. The well attempted to blow out which resulted in the drill stem becoming stuck and in the hole being plugged back and sidetracked at 10,812 feet. The sidetracked hole was carried to 12,216 feet and after a string of 5-inch casing was cemented at 11,795 feet, a production test was attempted, but the tubing and casing became clogged and the well tested an estimated 5,000,000 feet of dry gas with a maximum pressure of 3,950 pounds. Mechanical trouble developed and after testing at 10,368-76 feet with no results, the hole was plugged back and the well completed through perforated casing at 7,666-75 feet for an initial production of 25 bbls. of 50-gravity distillate per day through a three-eighths inch choke with tubing pressure 2,800 pounds and casing pressure 2,300 pounds.

The base of the Catahoula sand section was picked up at 10,235 feet and the top of the large Discorbis was topped at a point indicative of the thickness of the formation. No Heterostegina or Marginulina sections were found and the well encountered its showings from the Vicksburg horizon topped at 11,888 feet. Although no geological tops are available on the second well, a Schlumberger survey showed the distillate sand at 7,575-95 feet which is several feet higher than the discovery well.

The outcome of No. 1 Brookshire is of particular interest to operators along the Gulf Coast. If productive, it will be the first well to produce from a 12,000-foot horizon which will be an incentive for even deeper drilling throughout this district which has already 10 fields with production from 9,500 feet to below 11,000 feet.

The Journal's

ANNUAL PIPE LINE NUMBER

published September 16

Will feature notable articles on modern engineering practices in construction, operation, reconditioning, and maintenance of pipe lines. Widely known engineers with an authoritative knowledge of problems confronted in transportation of crude oil, gasoline, and natural gas will discuss, among other subjects:

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WILCOX ZONE

(Continued from Page 24)

NW of section 2 and the SE of section 22, have greater production per well and per acre than other similarly situated areas. However, in both of these cases much of this production was obtained by reason of early drilling and rapid production which caused the drainage of oil into them from surrounding areas.

Of the 125,684,692 bbls. of estimated future production, use of the area-factor indicates that approximately 63 per cent of this recovery will be obtained prior to February, 1939. At the end of the next 20-month period, or in October, 1940, only about 10 per cent of this amount will remain to be recovered.

The total estimated ultimate recovery of 395,652,378 bbls. may be compared with the Bureau of Mines estimate of 410,000,000 bbls., although this close agreement does not extend to the smaller areas for which the Bureau of Mines made estimates of future recovery.

The drilling of additional wells will probably not increase production per acre by an appreciable amount and will have little effect on the estimated total production unless these additional wells increase the producing area.

TABLE 7—ESTIMATED ULTIMATE PRODUCTION, WILCOX SAND ZONE, OKLAHOMA CITY FIELD

Area	Prod.	Wells	Bbls./ well	Area	Bbls./ acre	Acres/ well
1	*3,701,708	29	127,645	90	41,130	3 9
2	10,475,012	40	261,878	180	58,194	4 5
3	22,855,953	42	544,189	200	114,280	4 8
4	10,029,368	20	501,468	80	125,367	4 0
5	15,915,953	26	612,152	150	106,106	5 8
6	1,688,121	10	168,812	50	33,762	5 0
7	8,463,308	25	338,537	160	52,896	9 4
8	21,278,035	32	664,939	200	106,390	6 4
9	7,964,706	12	663,726	40	199,118	3 3
10	45,571,596	38	1,199,252	160	284,822	4 2
11	4,042,758	11	367,523	80	50,534	7 3
12	21,182,486	32	661,953	150	141,217	4 4
13	44,241,028	28	1,580,037	160	276,506	5 7
14	24,004,654	47	510,737	125	192,037	2 7
15	7,664,618	19	403,401	150	51,097	7 4
16	7,393,739	25	295,750	160	46,211	6 1
17	1,157,039	7	165,273	60	19,284	8 6
18	16,761,869	39	429,792	160	104,762	4 1
19	15,725,589	27	582,429	140	112,326	5 2
20	7,478,858	21	356,136	100	74,789	4 8
21	8,508,247	15	567,216	100	85,082	6 7
22	11,302,129	21	538,197	190	59,481	9 0
23	12,070,018	29	416,208	130	92,846	4 5
24	2,569,955	19	135,260	100	25,700	5 3
25	3,189,599	13	245,354	60	53,160	4 6
26	17,496,951	54	324,018	140	124,978	2 6
27	4,142,305	15	276,154	90	46,026	6 0
28	4,554,728	11	414,066	90	50,608	8 2
29	2,128,920	9	236,567	90	23,657	10 0
30	4,153,741	9	461,527	150	27,692	16 7
31	5,175,121	18	287,507	240	21,563	13 3
32	4,694,162	15	312,944	170	27,613	11 3
33	7,370,421	14	526,487	170	43,355	12 1
34	5,146,755	17	302,750	170	30,275	10 0
35	485,461	3	161,820	40	12,137	13 3
36	5,067,448	15	337,830	200	25,337	13 3
	395,652,379	807	490,275	4,725	83,735	5 9

*Includes Upper Simpson Dolomite.

States Cut Allowables

(Continued from Page 21)

3.34 per cent for 30,841 bbls.; Fitts-Simpson, 6.7 per cent for 48,695 bbls.; Fitts-Wilcox, 6 per cent for 4,543 bbls.; Langston, 19.1 per cent for 890 bbls.; North Lucien, 16 per cent for 435 bbls.; East Sasakwa-Wilcox, 12.8 per cent for 870 bbls., and North Wellston, 7 per cent for 1,617 bbls.

The 21 fields in class D or wildcat groups were allowed a total of 18,075 bbls. compared with 15,800 bbls. for August. Wells in these fields are allowed 100 bbls. per day, although some have been shaved back because of inability to make this amount.

Three of the seven fields in the unclassified prorated areas were left unchanged for September; they were: Fox-Simpson (one well) at 500 bbls.; Gray pool at 1,200 bbls., and the Oklahoma City Dolomite zone at 2,000 bbls. South Burbank was cut 1,983 bbls. to 13,217 bbls.; West Chandler cut 200 to 1,800 bbls.; Naval Reserve was cut 796 bbls. to 5,304 bbls., and Oklahoma City Simpson 500 to 18,000 bbls.

Total prorated allowable was fixed at 437,000 bbls., a decrease of 33,400 bbls. from August. Unprorated areas were unchanged at 163,000 bbls.

At the meeting on August 26 participated in by representatives of purchasers and producers, Mr. Armstrong stated it is the duty of the Oklahoma Corporation Commission to base allocation upon market demand and prior to 1933 it had been customary to arrive at market demand by securing nominations for crude desired by the purchasing companies for the next allocation period. This proved unsatisfactory because it had been common practice to submit nominations for more oil than actually desired as this had the effect of raising the allowable and, as many of the purchasers were also producers, this allowed them to secure more oil from their own wells.

This method has been abandoned and the practice now is to determine the volume of oil actually finding a market and to consider any oil in excess of that amount as going into storage and to put oil into storage is defined by Oklahoma law as one form of waste. It has, therefore, been the policy of the conservation department to try to fix new allowables within the actual market demand.

It is estimated 20,000 bbls. daily of Oklahoma City oil has been going to storage within and out of the state. The other 30,000 bbls. of excess oil is being placed in storage but the accumulation of stocks during the summer seems to have been enough to have satisfied the ultimate customer's desire for stocks at refineries or terminals. This increase in stocks is indicated by the following figures:

OIL IN STOCK IN THE UNITED STATES

	Barrels
January 23, 1937 (low point for year)	285,211,000
August 7, 1937	307,922,000
Increase	22,711,000

The Oklahoma Tax Commission reports a total of 55,511,000 bbls. of oil in storage in this state as of August 26.

	Barrels
Okla., Kans., and N. Tex. stocks, Aug. 7	128,285,000
Okla., Kans., and N. Tex. stocks, Jan. 23	113,928,000
Increase	14,357,000

Porter Regenold of Corpus Christi, Tex., has completed a new 3½ by 5-foot map of Zapata County, Southwest Texas, containing information on leases, land ownership and development.

Surprise Well Near Bradford; Big One in Greene County

By J. P. O'DONNELL

BRADFORD, Pa., Aug. 31.—The largest oil producer in the Bradford field in many years, originally gauged at 44 bbls. an hour, was gauging 15 to 18 bbls. an hour Tuesday morning, a week after completion.

Niagara Oil Corp., drilling what it expected to be a Third sand well on its Sliverville lease on Music Mountain, struck oil unexpectedly in the Second sand at 1,629 feet. The lease is about 3 miles southwest of Lewis Run and about 9 miles south of Bradford.

The unexpectedness of the strike found the drillers unprepared and, according to officials of Forest Oil Co., of which Niagara is a subsidiary, approximately 600 bbls. were lost before the well was capped. A crew of 30 men worked under floodlights to stem the flow and lay 3,000 feet of line to the National Transit system.

The well was finally capped at about 3 a.m. Wednesday, 15 hours after it blew in. The first gauge showed it was producing 44 bbls. an hour. Original estimates placed the initial flow at 240 bbls. per hour but this was revised downward rapidly to 100 bbls. per hour before the well was brought under control and a true gauge taken.

Intermittent Flows

Workmen hastily erected a 100-bbl. tank and this took care of production between the intermittent flows of 20 to 25 bbls. at half-hour intervals. Another 100-bbl. tank was added and since two 500-bbl. tanks have been erected to bring total storage capacity to 1,200 bbls.

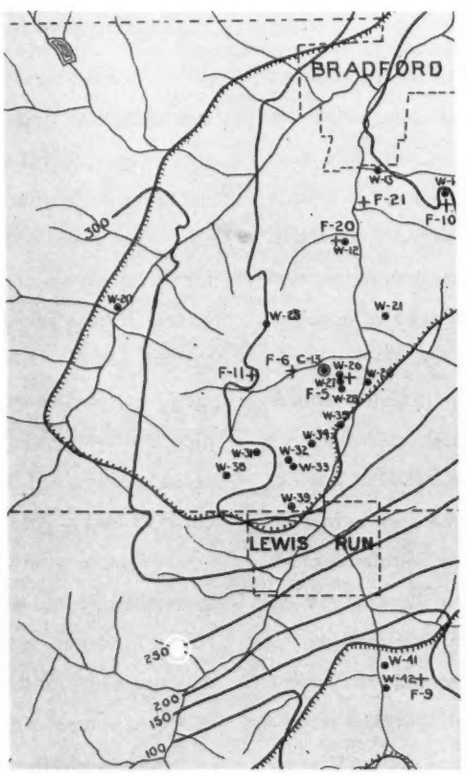
Harold Mays, driller, and his son, Richard, 18, a tooldresser, were the only workmen at the well when it blew in. The well started with a flow estimated at from 25 to 30 bbls. at 20-minute intervals. The flow gradually increased until the tools were pulled out when the flow intervals increased to about 30 minutes with an estimated 50 bbls each flow.

A substantial flow of gas accompanied the oil and constituted a dangerous fire hazard. A man-powered crane was employed to pull the tools and eliminated danger of an explosion that might have been caused by the drilling engine.

Despite the size of the well there was no frenzied rush by adjoining property holders to start drilling. Minard Run Oil Co., has reportedly staked a location approximately 1,000 feet east of the big producer but Heckel Oil Co. and McVay Brothers, both holders of adjacent leases, have indicated they will await further developments before starting to drill. Niagara Oil Co. has also shown a disposition to wait for definite indications from the new well before drilling another.

Production in the Bradford field is almost entirely from the Third Bradford sand though a comparatively few wells are producing from other formations including the Second sand. These, however, are average Pennsylvania wells. The oil flow was struck at the bottom of what apparently was a 26-foot break in the Second sand so the drillers were unable to establish definitely just from what formation the well is producing. While some are inclined to view the well as more or less of a freak, having tapped some small previously untouched pool, others regard the sustained heavy gas pressure as indicating a reservoir of some consequence.

The Bradford field is somewhat U-shaped with the arms running northeast-southwest and the base of the U in the northeast. The Sliverville lease is near the edge of the north side of the lower



White circle at end of 250 contour line indicates location of Bradford field well

arm. It is outside the water-flood area but a well drilled previously on the lease, 1,000 feet distant from the gusher, is producing from the Third sand.

Greene County Well

While the excitement created by the Bradford well was still high, J. R. Orndorf completed the best producer in years in southwestern Pennsylvania when his No. 2 on the Mattie I. Scott farm in Center district, Greene County, reached a 30 bbl.-per-hour peak after it was drilled into the Nineveh Thirty-Foot sand.

The Scott well drilled into the pay sand at 3,187 feet. It was bottomed at 3,213 feet, 26 feet in the sand, and in the first 10 hours flowed 220 bbls. Next morning the well was deepened and its flow advanced to 30 bbls. an hour which it maintained for some time before gradually declining until it reached 12 bbls. per hour late Friday. In addition to the oil, the well was producing 500,000 feet of gas per day. Southwest Pennsylvania Pipe Lines had run a line to the well before it was drilled in and there was no loss of oil.

The well is the largest to be drilled in since the discovery of the Nineveh Thirty-Foot pool extension in Center district. A number of good wells ranging up to 200 bbls. per day initial have been completed on the Milliken, Orndorf and Harvey farms north of Scott farm where the original producer was brought in at 100 bbls. The area south of the Scott farm remains untested.

Most of the leases in the vicinity are held and reports from Waynesburg, county seat, are that present holders will conduct a campaign of their own. The first wells in this area were drilled before the turn of the century and while a number have been completed since the improvement in the price of crude oil, none has been comparable to No. 2 Scott.

An interesting sidelight is provided in a comparison of the production of these two wells with other producers in the Pennsylvania Grade crude fields. The combined initial production of the Orndorf and Niagara Oil Corp. wells approximated 2,000 bbls. In the first six months of the current year, 1,613 oil-producing wells were completed in the Pennsylvania fields with a total reported initial production of 5,037 bbls., or 3 bbls. per well.

Niagara's well caused the first major excitement in the northern Pennsylvania fields since 1922 when the Clinger Oil & Gas Co. well proved the Queen sand pool in Forest County. This well came in in late June of that year with an initial production of 500 bbls. per day but before the year was out more than a score of other wells were drilled to the 1,100-foot sand with successively lower initial production.

Crude Oil Stocks

The Bureau of Mines reports stocks of domestic and foreign crude petroleum totaled 308,737,000 bbls. on August 14, an increase of 815,000 bbls. the preceding week. There was an increase of 1,074,000 bbls. in stocks of domestic crude oil but a decrease of 259,000 bbls. in foreign. Daily average runs to stills increased from 3,365,000 bbls. to 3,375,000 bbls. Imports of crude averaged 118,000 bbls. daily, an increase of 43,000 bbls.

Stocks of crude (in thousands of barrels) were:

	Aug. 14	Change from Aug. 7
Pennsylvania	4,137	*41
Other Appalachian	851	*4
Lima-N. E. Indiana-Michigan	1,314	†10
Illinois-S. W. Indiana	9,623	†28
North Louisiana-Arkansas	10,270	†19
West Texas-S. E. New Mexico	30,503	*128
East Texas	24,926	†48
Other Mid-Continent	128,983	*698
Gulf Coast	24,789	†3
Rocky Mountain	24,327	†37
California	27,789	*298
Foreign	2,585	†259

*Increase. †Decrease.

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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The Bureau Estimates

Comment frequently heard regarding the Bureau of Mines estimates of demand and recommended output indicates many in the industry do not understand how the monthly figures are determined or their proper relation to the industry's operations.

The bureau maintains a statistical record showing trends in the consuming markets and determines the quantity of petroleum production required to satisfy them from month to month. For instance, it compiles reports covering motor vehicle registrations, new car production and trends in the automotive industry, as well as general business conditions which affect the activity of gasoline consumers and the quantity of motor fuel they will require, month by month. Similar data are compiled regarding outlets for other fractions of crude oil.

From these data and information on what has actually taken place in previous months the bureau arrives at an estimate covering total demand for petroleum products which has in the past been sufficiently accurate to serve the industry as a guide in its future operations.

With this calculation of total demand the bureau makes its estimates of required production and its recommendations to the states. This estimated demand in effect is distributed among the states on a basis of what has happened in the immediate past. Assuming, for instance, that a state has had 15 per cent of the total demand it will give it that percentage provided it has disposed of that much crude or products in previous months. If the crude is not disposed of, it is taken as an indication it does not have a market for that much oil and it would have a lower percentage of the market in the future. On the other hand if a state produces in excess of the recommendation and disposes of all of the crude, it will be given automatically a larger share of the market in the next estimate.

Just how this works out is indicated in the case of Louisiana. This state actually produced last year and the early part of this year greatly in excess of the bureau estimate of demand. There was a ready market for the crude due to its nearness to markets and its production was disposed of without any increase in stocks.

The net result has been that the demand figure for that state has been increased from month to month so that at the present time the estimated requirements and actual production are within 10,000 barrels of each other.

The point is that the bureau does not attempt arbitrarily to divide the consumer markets among the oil states. It does not, for instance, say that Ohio shall obtain its gasoline from Mid-Continent crude as it did for many years. Due largely to the extension of the gasoline pipe line systems and inland waterway transportation, a substantial part of the Ohio gasoline market has gone to Gulf Coast and Atlantic Seaboard refiners.

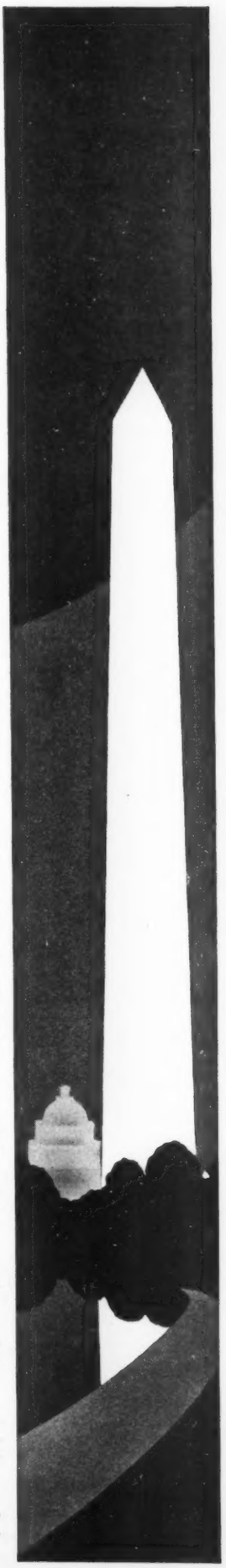
A state with a large new supply of crude produced more cheaply and with relatively low transportation costs can, if it desires, ignore the rest of the industry and take a larger share of the total market than it ever had. The effect, of course, will be to reduce the demand for crude or products and back up production in other states that previously served that part of the market.

The bureau has to base its conclusions on what the states do. There is no abrogation of the law of supply and demand and shouldn't be. If one or more states want to take more than their fair share of the market they can do it—provided the rest of the industry does not fight back and bring about a competitive situation based on over production and low prices.

Fortunately there is evidence over the past month that the state regulatory bodies and operators realize this situation and have indicated their willingness to contribute their share in the needed September curtailment.

Breathing Spell Is Short Until Congress Meets

By HENRY D. RALPH



WASHINGTON, D. C., Aug. 30.—The adjournment of a session of congress noted more for the laws it refused to pass than for its accomplishments gives business only a small breathing spell, for during the recess lines are being drawn for a renewal of the legislative battle next winter.

All bills retain the status they had on adjournment day, and congress will return certainly in four months, and possibly in two months if President Roosevelt listens to pleas from many sources that he call an extra session about November 1. Meanwhile, the president has let it be known he will not let up his drive to extend the New Deal and make it permanent and to this end he may make a number of speeches throughout the country during the fall to rally public support to his program.

Looking ahead to the next session, it is apparent many measures of vital interest to business will be under consideration. One which will affect the oil industry perhaps more than others is the proposed general revision of all internal revenue laws. A special house committee and experts of the Treasury Department will begin work on this some time in advance of the reconvening of congress. Besides provisions which will affect all business equally, such as modification of the oppressive corporation surplus tax, the revision may make permanent disposition of the federal gasoline, lubricating oil and pipe line taxes which were extended for another two years during the last session, and quite certainly will deal with the problem of oil depletion allowances. The Treasury Department's determination to treat oil depletion allowances as a "tax loophole" was again shown in a letter the department wrote to President Roosevelt regarding the new tax loophole plugging law, a letter which, incidentally, criticized the partial exemption given oil royalty companies from the punitive taxes on personal holding companies and which suggested this subject, too, may be reconsidered next year. This letter said the department was opposed to "a special and discriminatory provision to enable so-called mineral royalty companies to escape classification as personal holding companies," and declared one of the major omissions of the bill resulted from the decision of the joint committee on tax avoidance to postpone serious consideration of the problem of percentage depletion until the next session.

Wage and Hour Bill

A wage and hour control bill will most certainly be enacted next session, and the administration hopes it will get a more sweeping and drastic measure than would have been passed had the pending bill come to a vote in the house at the last session. In addition, there are indications there may be coupled with the wage-hour bill a measure to regulate business practices and competitive conditions, a partial revival of the NRA. The O'Mahoney federal incorporation bill also is far from dead, and the long-rumored general revision of the federal antitrust statutes may come to a head next winter.

Other important measures facing the next session may be listed as follows:

Appointment of additional justices to the Supreme Court, although the senate defeated this proposal, the president has indicated he has not abandoned the idea.

Reorganization of the executive departments of the federal government, at the discretion of the president, a plan which would involve the operation of the government's activities relating to the oil industry.

National planning and electric power production through the creation of regional authorities throughout the country similar to the TVA.

An antichild labor bill, already passed by the senate in two different forms.

Regulation of air and water transportation by the Interstate Commerce Commission.

Extension of the authority of the Federal Trade Commission over advertising and other business practices for the protection of the public.

Amendments to the social security act.

Revision of the bankruptcy and securities acts to provide closer federal control over the reorganization of corporations.

Amendments of the national labor relations act for the benefit of employers.

Revision of administrative provisions of the tariff act, already passed by the house.

Natural gas control bill, passed by the house and on the senate calendar.

Nye resolution directing the attorney general to institute ouster proceedings against the exploitation of petroleum deposits underlying coastal waters, passed by the senate but not the house.

The stream pollution control bill which died in conference when congress adjourned.

Consolidation of naval oil reserves in California, already passed by the senate.

Repeal of the so-called long and short haul clause of the interstate commerce act, already passed by the house.

A new unemployment relief plan.

Further attempts at government economy and balancing the budget.

Laws Enacted

For all the work left undone, the last session enacted a number of measures of considerable effect on the oil industry, the principal being:

Extension for two years of the Interstate Oil Compact and of the Connally "hot" oil law.

Extension for two years of the nuisance excise taxes on gasoline, lubricating oil, transportation of oil by pipe line, tires and other commodities, and of the import taxes on petroleum and products.

The tax loophole plugging law with special treatment for oil royalty companies.

The new helium monopoly act.

The extension for three years of the president's authority to negotiate reciprocal trade agreements with foreign countries.

Extension for two years of the president's powers to revalue the dollar and of the treasury's stabilization fund for international currency operations.

The bituminous coal control act.

Tydings-Miller resale price maintenance act.

Reform of federal court procedure to restrict injunctions against the operation of acts of congress and to speed determination of constitutional questions.

Provision for retirement of Supreme Court justices on pensions, which resulted in retirement of Justice Vandevanter, and the appointment of Senator Black to the court.

Provision for a census of unemployment.

The O'Mahoney-Greever act extending to December 31, 1939, oil and gas prospecting permits which have been committed to a unit plan of development or under which there has been recent drilling.

Extension of the neutrality act for three years.

Acts inviting foreign nations to participate in the Oil-World Exposition at Houston this October and the International Petroleum Exposition at Tulsa next May.

Stringent Regulations Are Proposed for Wilmington Development

LOS ANGELES, Calif., Aug. 30.—One of the most stringent regulatory ordinances on oil development ever devised by a California municipality is definitely assured of enactment at the next meeting of the Long Beach harbor commissioners. It is designed to regulate drilling in the Long Beach harbor area comprising the eastern end of the Wilmington field. The electorate of Long Beach voted overwhelmingly June 15 to lift existing drilling restrictions which prevented easterly development of the field.

One section of the bill provides for posting of a surety bond of $25,000 per well, or a blanket bond of $200,000 where an operator has eight or more wells, to insure compliance with present and future regulations.

Regarding directional drilling and subsurface surveys, section 7D provides that, "permittee shall, from time to time, make and keep accurate subsurface directional surveys of the well drilled prior to the time each string of casing is cemented, prior to the time casing is perforated, and prior to the time such well is placed on production. The result of each such survey shall be accurately shown on a plat, upon which shall appear (a) the exterior boundaries of the property upon which such well has been or is being drilled, redrilled or deepened, and if such property is part of, but less than the whole of, a larger parcel of land owned, leased or controlled, or operated or to be operated, as a single drilling or operating unit or lease, the exterior boundaries of such larger parcel; (b) the location of such well on the surface with relation to such boundaries; (c) the subsurface location of the point of cementing each string of casing and (d) the subsurface location of the lowest point in such well and of each place in such well from which production of oil, gas and/or other hydrocarbon substances is procured or obtained. . . .

"Whenever permittee shall drill, redrill or deepen any well and the location thereof at the surface of the ground is within 100 feet of any exterior boundary line of property owned, controlled or leased by permittee, permittee shall, in addition to any and all other subsurface directional surveys required of him, make and keep accurate subsurface directional surveys of such well with stations at not less than 100-foot intervals in such well."

The ordinance requires a separate application for each well, imposes a derrick fee of $750 each with an annual investigation charge of $50 per derrick and a renewal permit fee of $100 annually. In addition to providing for exclusive use of steel derricks, the ordinance makes it obligatory for operators to keep well logs, core at frequent intervals, equip wells with casings of sufficient strength and to install safety devices and strictly forbids the blowing to the air of any substantial amount of gas either before or after processing.

It also stipulates that the permittee shall, upon abandonment or discontinuance of any operations, restore substantially all streets, sidewalks, and other public places which may have been disturbed or damaged, and remove all derricks, and other structures, machinery and equipment, and clean and remove all oil and mud from sumps, cover and level all sumps, remove all oil, litter and other substances, and indemnify the city from all liability for the cleaning up and restoration of either public or private property.

Wooden derricks are prohibited in the new area. The ordinance further prescribes that: "Whenever it shall be necessary, in the judgment of the board to protect navigation, commerce, and fisheries, or to protect any public or private property, the board may require that any such derrick, and its appurtenances and appliances, be sufficiently enclosed with and by the use of galvanized iron, and the permittee shall, within five days make such enclosure."

Elk Hill Suit

LOS ANGELES, Calif.—The government gained a point in its long fight to regain control of oil-bearing lands near Elk Hill reserve, in San Joaquin Valley, when Federal Judge Leo Yankwich ruled its suit is one of equity and not of law. As a result, the trial will be before a federal judge without a jury and confined to equity issues alone. Trial will be set for some time in October at Fresno.

Texas Conservation Hearings

AUSTIN, Tex.—The Railroad Commission will determine at a hearing in Austin September 8 an efficient oil-gas ratio for the Lake Long field in Anderson, Freestone and Leon counties.

The commission has ordered a hearing in Austin September 7 for determining the need of special oil conservation rules in section 172, Block 2, H.&T.C. Railroad Survey and adjacent area in Fisher County.

THE MARKETS*

CRUDE OIL: *Important crude buyers in the Mid-Continent have indicated they will establish their own proration in certain fields if the state curtailments for September are not carried out. This is interpreted as a threat to a continuance of posted schedules in those areas should excess crude oil become available under the market. In contrast, the crude market continues tight in some of the Gulf Coast fields. Posted schedules were unchanged over the past week.*

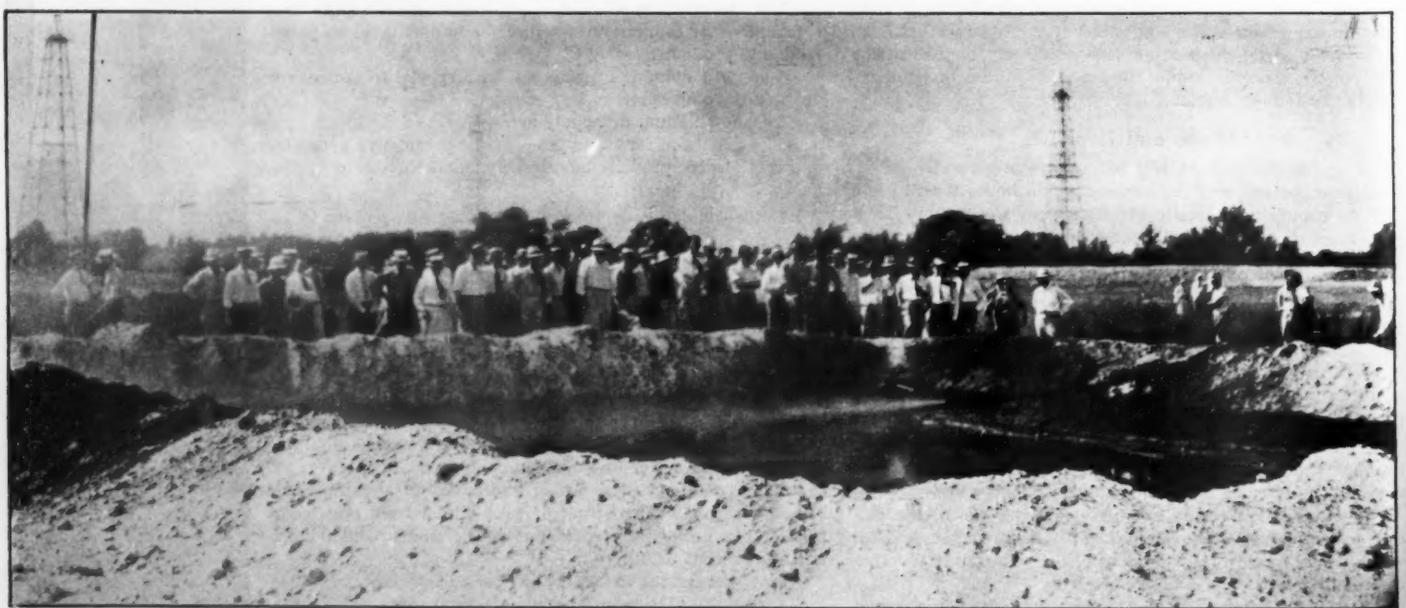
REFINERY: *Several refining areas reported better tone to gasoline tankcar markets based on belief that crude curtailment programs will be reflected in lower crude runs to stills. Active demand for fuels and distillates. No important changes in prices.*

TANK-WAGON - SERVICE STATION: *While posted dealer prices for gasoline are generally unchanged there is considerable price cutting in retail markets. This includes the regular grade material as well as third grade.*

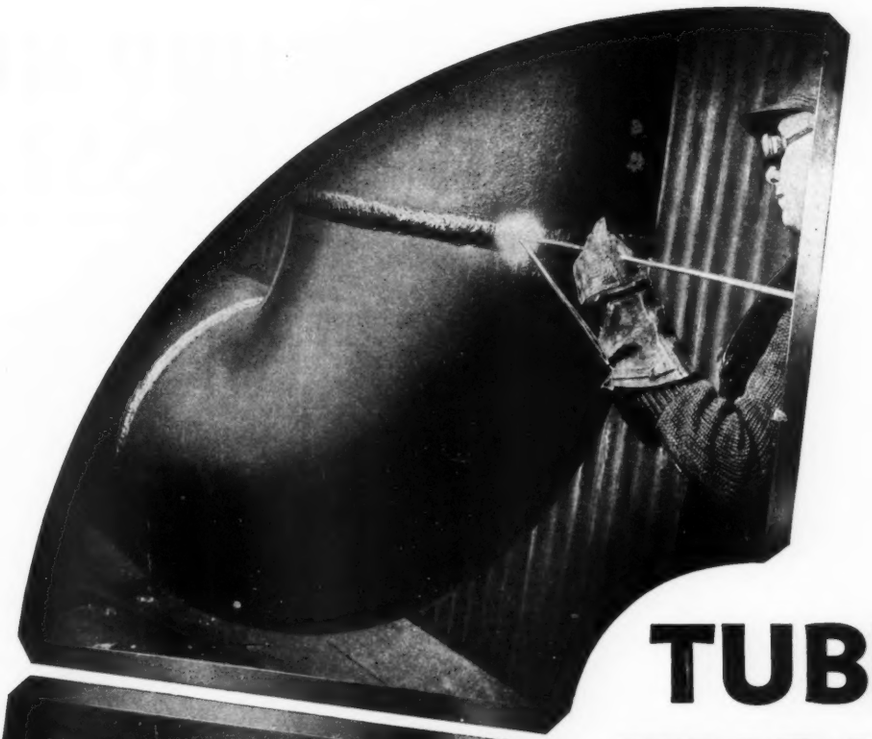
FINANCIAL: *Oil stocks declined 3.5 points from average close of previous week. Average of 30 representative stocks for week ending August 28: High, 41.49; low, 30.58; close, 39.93. Week ending August 21: High, 43.43; low, 40.89; close, 41.28.*

Detailed information in Market Section.

WATCHING FLOW INTO AN ILLINOIS SLUSH PIT



The city of Olney, Richland County, Illinois, recently celebrated its advent as an oil center and the day's doings were attended by about 300 oil men. The group is watching the flow of oil into the slush pit at Pure Oil Co. No. 2 O. Poppe, over the line in Clay County. Photo by Spieth Studio, Olney.



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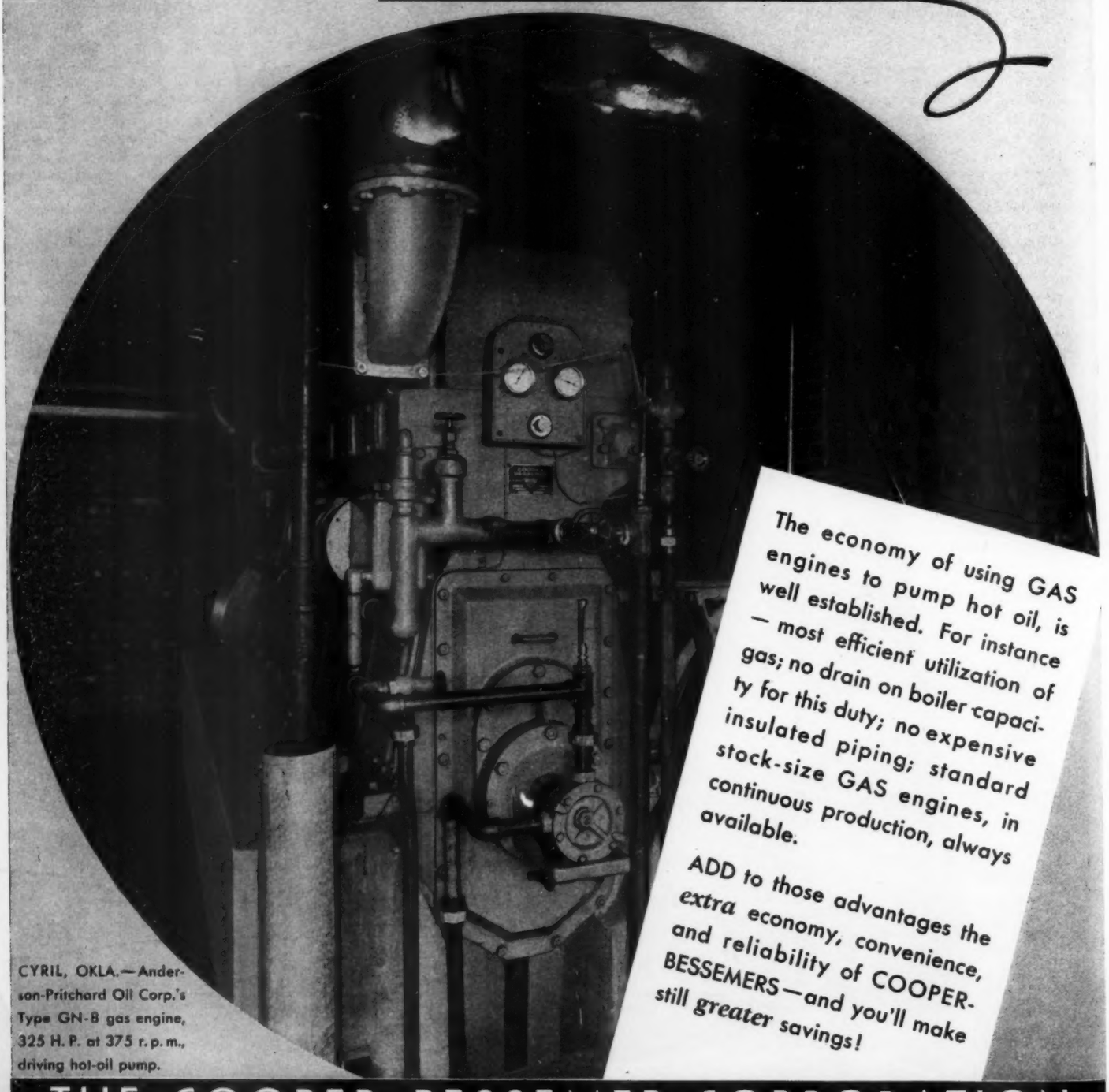

CYRIL, OKLA.—Anderson-Pritchard Oil Corp.'s Type GN-8 gas engine, 325 H. P. at 375 r. p. m., driving hot-oil pump.

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Stephens County Strike Gives Impetus to Deep Pay Search

By DAL DALRYMPLE

Oklahoma is back in the oil, to paraphrase a popular expression, and optimism is soaring in Sooner State oil circles as the result of wildcat strikes of the past week. Discoveries in Stephens and Tillman counties provided the tonic.

Down in the old shallow Milroy area of southeastern Stephens County, Carter Oil Co. and associates found deep production at No. 1 Harley, C NE NE section 24-2s-3w, to provide Oklahoma oil men with a thrill comparable to that generated when deep gusher production was discovered in the nearby Fox field of Carter County late in 1935.

Coming almost as an anticlimax to the Stephens deep discovery, production was uncovered in Tillman County, southwest of Frederick and near the Red River, at Indian Territory Illuminating Oil Co. and Foster Minerals Corp. No. 1 Graham, NW SW NE section 1-3s-19w. This area, observers believe, may become a pool of considerable size.

The Harley well flowed 1,790 bbls. of oil, including 302-bbl. oil load, in 16 hours after acid treatment, with average flow of 115 bbls. of oil net for 14 hours. It then was shut in for additional tankage. Production was from Oolitic lime at 7,554 feet, total depth 8,157 feet. The oil tested 57 gravity, ranking as the highest gravity crude in Oklahoma today. It was accompanied by more than 40,000,000 feet of gas. Casing pressure reached a maximum of 3,600 pounds and tubing pressure was 3,500 pounds. Shell Pipe Line Co. was to lay a line to the producer, which is in the center of a 40-acre tract and was expected to be given a flat allowable of 500 bbls. daily.

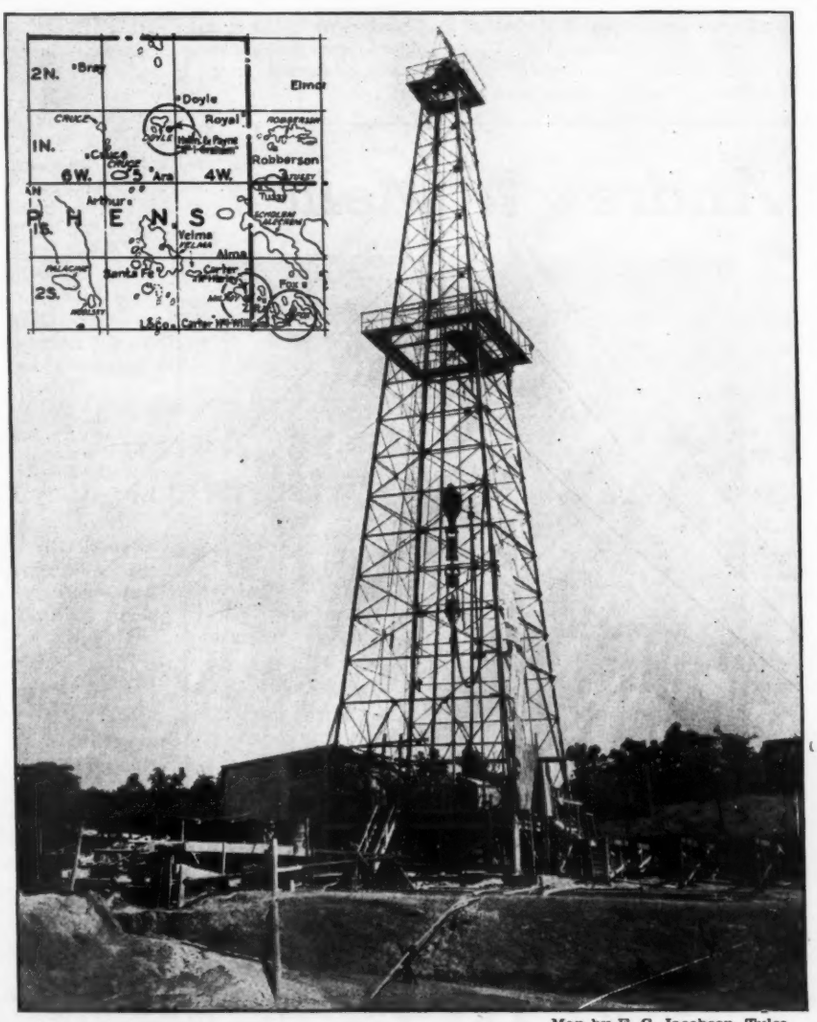
The Well Log

Log of the well, from Viola lime topped at 5,152 feet, was as follows: Simpson, 6,060 feet; sand, 6,304-32 feet, showing oil and gas; Dolomite, 6,880-93 feet, showing oil; lime, 7,133-36 feet, showing oil; Dolomite, 7,216-20 feet, showing oil; showings of oil and gas at 7,295-7,330 feet; lime, 7,490-7,504 feet, light showing of oil; Bird's Eye, 7,480 feet; recovered 8 feet 4 inches of saturated lime at 7,320-30 feet; Oolitic lime 7,554 feet; cored 7,569-73 feet, show of oil; cored 7,573-83 feet, lime show oil; cored 7,593-7,603 feet, recovered 6½ feet of Oolitic lime showing oil; cored 7,605-15 feet, showing oil in fractures; total depth, 8,157 feet; acidized with 5,000 gallons.

Associated with Carter Oil Co., which owns 57 per cent of the community lease, are Magnolia Petroleum Co. with 20 per cent, Skelly Oil Co. with 15 per cent and Mudge Oil Co. with 8 per cent.

The new well is just within the Stephens County line and is about 4½ miles northwest of Carter Oil Co. and others No. 1 Ruth Williams, deep discovery in the old Fox field of Carter County, which has been producing 500 bbls. of oil daily for more than a year at total depth of 8,105 feet in lime, now believed to be Oolitic. It was the Ruth Williams strike that started a farflung search for deep pay in southern Oklahoma — a search that resulted in several failures before the Harley came through.

It was after considerable geologic study, facilitated by extensive outcroppings revealing the subsurface structure, that Carter Oil Co. and associates—who shared the belief deep drilling would tap hitherto untouched oil reserves in southern Oklahoma—started the Ruth Williams test. They were seeking Ordovician production, and specifically Wilcox sand. They found the former, but not the latter, for at 8,088 feet the well blew in after operators injected acid to free stuck drill pipe and for several days it flowed uncurbed at the rate of 8,000 to 10,000 bbls. It finally was killed and recompleted at 8,105 feet after considerable delay.



Map by E. C. Jacobson, Tulsa

Carter Oil Co. and others No. 1 Harley Community, section 24-2s-4w, has opened a deep pool in southeastern Stephens County. Inset map shows relation of the strike to the Ruth Williams deep discovery in the Fox field, Carter County, and the new pool recently opened in the Doyle area, Stephens County

More Tests Planned

No such difficulty was experienced in completing the Harley well and it was not so large a producer as the Ruth Williams, but it is of comparable significance, further encouraging operators in their quest for the elusive deep pay and proving a considerable area between the two locations for development. Already additional tests are being planned, and Carter Oil Co. has made location for its wholly-owned No. 1 Harley, C NW NW section 19-2s-3w, an offset to the discovery well. Other companies are considering locations and endeavoring to reach agreements for more community tests. A 40-acre spacing program is said to be favored by companies interested in the Milroy area. Magnolia, Skelly and Mudge companies own leases in the vicinity.

Development of deep pay horizons in southern Oklahoma will be slow and conservative. C. E. Savage, assistant chief scout for Carter Oil Co., writing in The Lamp, Standard Oil Co. of New Jersey publication, at the time of the Ruth Williams strike explained why this is so. He said: "It is difficult to visualize now the full significance of the deep strike or to what extent development will reach. It costs money to knock a hole down 8,000 feet, particularly through hard formations, so that further drilling will naturally be slow and cautious, extending over a period of several years. Eventually the development will doubtless be farreaching as heavy modern

rotaries slowly grind their way down to older and deeper strata."

Two deep tests already are under way in the Fox area, near the Ruth Williams, Gulf Oil Corp. No. 1 Johnson, C SW NW section 27-2s-3w, northwest diagonal offset to the Williams, was drilling at 5,305 feet in shale. Same company's No. 1 Smith Estate, C SW SW section 26-2s-3w, east and south of the Williams, was drilling in chert at 4,441 feet.

Several Failures

Although deep failures have been drilled in the past year or two in Marshall, Carter, Love, Jefferson, Stephens and Caddo counties, the new strike at the Harley encourages operators to further efforts to find Ordovician oil in those and neighboring counties of southern and southwestern Oklahoma.

The Tillman County discovery well is attracting considerable attention because of the comparatively shallow depth. It found production in Canyon lime at 3,073-81 feet and flowed 120 bbls. of oil in one hour, then settled to 40 bbls. an hour before being shut in. It later swabbed at the rate of 60 to 70 bbls. of oil an hour, and field men estimated it would be good for around 500 bbls. of oil daily. The oil tested 39.6 gravity at 77 degrees. The Graham well is west of Indian Territory Illuminating Oil Co. and others No. 1 Hatler, which recently was completed as a small producer to open a Tillman County pool.

The Harley is the second wildcat to find new production in Stephens County this year. In the old Doyle area, northeastern Stephens County, Helmerich & Payne and associates No. 1-A Graham, SW SW NE section 12-1n-5w, was completed several weeks ago as a 400-bbl. well. It was drilled to 5,014 feet, plugged back to 3,850 feet and perforated casing to complete as a producer. Two other wells have since been completed in the area and several are drilling.

There are oil men and geologists who believe a major pool yet will be uncovered in southwestern Oklahoma, and these recent strikes provide the impetus to continue the search.

Unit Operating Contracts

Chairman Hayes McCoy, of the legal committee of the General Mid-Continent Oil and Gas Association, announces appointment of a subcommittee on unit operating contracts, which will consider revisions in the association's recommended standard form of unit operating contract and the accounting procedure schedule. The subcommittee is representative of all three divisions of the general association, and is comprised of the following:

William O. Beall, chairman, Sinclair Prairie Oil Co., Tulsa; Alvin Richards, Pure Oil Co., Tulsa; J. S. Atkinson, Gulf Oil Corp., Shreveport, La.; Henry Walker, Arkansas Natural Gas Corp., Shreveport; T. L. Foster, Sun Oil Co., Dallas, Tex.; T. R. Freeman, Atlantic Refining Co., Dallas; W. H. Francis, Magnolia Petroleum Co., Dallas.

The standard form of unit operating contract and accounting procedure recommended by the association was adopted by the unitization committee of the Mid-Continent Oil and Gas Association, on behalf of the association's board of directors, in 1931. These standard forms were published and supplied to the industry by the association in the same year.

Death of Andrew W. Mellon

Andrew W. Mellon, former secretary of the treasury and ambassador to Great Britain, who died last week, was one of the world's largest investors in the oil industry. The greater part of his fortune, acquired in banking and investment in industrial and commercial enterprises, is credited to participation in the Gulf Oil Corp.

His interest in oil dates back to the early nineties, the financing of three pipe line companies in the Pennsylvania and West Virginia fields and the Bear Creek Refining Co. The Craig-Mellon line or W. L. Mellon Pipe Line was organized in 1892 to serve as an outlet for the McDonald, Washington County, Pa., fields to Pittsburgh. A line was laid to Sistersville, W. Va., the following year and in 1895 the Crescent Pipe Line, a 5-inch trunk line, was laid from Hays station, Pittsburgh, to Philadelphia. These lines were subsequently sold to the National Transit.

When Spindletop was opened in 1901, Guffey & Galey needed a pipe line to tidewater at Port Arthur and Col. J. M. Guffey asked the Mellon brothers to finance it. The Gulf Refining Co. was organized in 1901, the Gulf Refining Co. of Louisiana in 1905, and the Gulf Pipe Line Co. in 1906. The Mellon family retain the controlling interest in the Gulf Oil Corp.

Trinity Court Studios

A. W. MELLON

Colonel E. O. Thompson Sees No Need Now for Alarm

AUSTIN, Tex.—"We are going into the fall and winter months with the oil business under control," Railroad Commissioner Ernest O. Thompson said Monday in a formal statement commending the regulatory bodies of Oklahoma and Texas for reducing allowables.

His statement was based on reports from Oklahoma of heavy salt water intrusion in the Moore pool and Fitts field which he said were once a threat to the industry but "are no longer to be placed in that category.

"The Oklahoma commission made a decided cut in their production effective September 1 and the Railroad Commission of Texas attempted to bring Texas production within the requirements of market demand and it appears to me that nature, working in its regular way, and determined efforts on the part of regulatory authorities to do their duty in keeping supply within reasonable limits of demand, that we are going into the fall and winter with the oil business under control.

"I think it well to note in this connection, just to emphasize what I have said, that oil production for the last reported week in the whole United States was up only 15,771 bbls.; crude stocks were down 328,000 bbls. during that week and gasoline stocks were down 1,827,000 bbls. and refinery runs were up 75,000 bbls.

"When you add the equivalent crude production of 1,827,000 bbls. of gasoline, which was withdrawn from stocks to the actual drawdown of 328,000 bbls. of crude stocks withdrawn, you will see most readily that we are not and have not been currently producing too much crude to meet the current market demand. As a matter of fact, we are withdrawing heavily in stocks in both gasoline and crude to meet current requirements.

"The figures which I am quoting are taken from The Oil and Gas Journal for August 26.

"Then when you consider that Texas has reduced its production 110,000 bbls. and Oklahoma 53,000 bbls., effective September 1, I believe that we have shown the most courage and determination to comply with our statutes and the helpful cooperation and understanding in this problem as shown by the regulatory authorities of the oil producing states is in effect convincing to me that the oil industry need not be alarmed."

Clay City Field Extended

The Clay City pool in Clay County, Illinois, was extended 2½ miles southwest at Walter Duncan No. 1 Chicago Joint Stock Land Bank, NE SE section 8-2n-8e. It produced 810 bbls. of oil in 12 hours, with 2,000,000 feet of gas daily, at total depth of 3,059 feet.

OBITUARIES

PAUL NEIGHBORS, 60, California oil operator, died August 28 in a Houston, Tex., hospital. He was a brother of Mrs. Byron M. Nowery, wife of the general superintendent of the United Gas Public Service Co. For 10 years he was an oil operator around Taft, Calif. Formerly he operated in Louisiana fields.

RAY R. ROSIER, 54, Tulsa gasoline broker, formerly connected with Signal Gasoline Co., was found dead Monday night in his office.

KNOX L. GARVIN, Duncan, Okla., oil man and state senator, died in Johns Hopkins Hospital in Baltimore, Md., August 25. He had oil interests in Oklahoma and Texas, and became a prominent figure in the industry when he assumed command of state well drilling on capitol land when Governor Marland defied Oklahoma City zoning ordinances and declared martial law.

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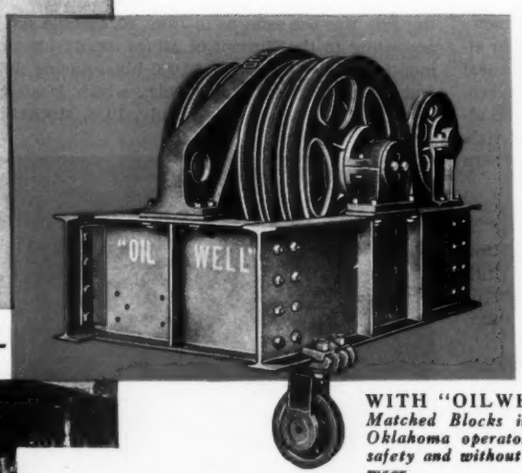

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Natural Gas News

Fort Worth Rate Cut

AUSTIN, Tex.—The Railroad Commission has ordered a reduction, amounting to more than 50 per cent to the smallest consumer, in rates charged by the Lone Star Gas Co. in Fort Worth. It instructed the company to refund customers the difference between old and new rates from August 7, 1935, to September 1, 1937.

The order cannot become effective until after courts have determined its validity. Attorney General William McGraw immediately filed suit in district court to insure it will be tested in a state rather than a federal court.

Dallas consumers hope to get the same rate reductions if the Railroad Commission's order is upheld by the courts, Joe Leopold, Dallas utilities supervisor, said.

"Consumers had better not be too optimistic," Leopold added. "That order is going to be fought by the Lone Star Gas Co. through the courts for a long time."

New Brunswick Gas Operations

MONCTON, New Brunswick.—New Brunswick Gas & Oilfields, Ltd., which holds an exclusive drilling concession over large areas of the province, is testing 500 square miles of potential oil and gas territory between Hillsboro and Sussex. The area is regarded as a possible extension of the proven field in Albert County, but is expected to yield crude instead of gas.

Steady development has been carried on in the Albert field since about 1907, when New Brunswick Petroleum Co. interested British capitalists headed by Dr. J. A. L. Henderson who organized Maritime Oilfields, Ltd. Some 120 wells were drilled, proving an extensive gas field whose production was piped to the city of Moncton and the town of Hillsboro. The gas production to date is estimated at 16,000,000,000 feet valued at $7,000,000 with incidental oil production valued at $500,000. Some of the wells recorded initial flows of 10,000,000 feet a day.

Michigan Gas Legislation

SAGINAW, Mich.—Legislative entanglements thrown up by the 1937 Michigan legislature in efforts to concentrate control of the state's natural gas industry in one branch of the state government will have to be cut by rulings from the attorney general's department before state officials or gas producers can know definitely just where they stand.

Under legislation enacted in 1929 the director of conservation was designated as supervisor of wells and controlled all drilling and exploration work. The same legislation gave the Public Utilities Commission authority over construction of pipe lines, gathering systems, and rates for retail sale.

In advance of the 1937 session, Senator D. Hale Brake, R., of Stanton, proposed a program which would have all but eliminated the Utilities Commission from any authority over gas and oil. His proposals were predicated on his belief that the landowners, particularly in the natural gas fields —of his home county of Montcalm—were being deprived of a fair return. Both houses enacted a natural gas bill, intending the supervisor of wells to have all authority over the gas industry. A similar bill, transferring control of the oil industry to the supervisor of wells, passed the house of representatives but died in the senate committee.

As the 1937 gas legislation is now viewed, there remains a division of authority between the Utilities Commission and the supervisor of wells. In one section the law gives complete jurisdiction to the supervisor of wells, "except as provided in Act 9 of the Public Acts of 1929, as amended." But Mr. Brake's bill to amend Act 9 failed to pass, so neither the supervisor of wells nor the Utilities Commission can be sure just where either stands.

P. J. Hoffmaster, director of conservation and supervisor of wells, plans to ask a conference with the Utilities Commission and the attorney general's department in an effort to iron out the difficulties. Until there is a ruling from the attorney general, the supervisor of wells will continue to control drilling operations, etc., and the Utilities Commission will take charge when the gas arrives at the well mouth.

Bow Island Gas Storage

BOW ISLAND, Alberta.—Following the annual overhauling of machinery, repressuring operations in the Bow Island field by the Canadian Western Natural Gas, Light, Heat & Power Co. have been resumed. Since operations were commenced in August, 1930, more than 9,000,000,000 feet of waste gas from the Turner Valley field has been forced back into the Bow Island field for storage. When repressuring started the rock pressure, originally 805 pounds, had dropped to 235 pounds, but since then it has been built up to 541 pounds.

Natural Gasoline

Study Vapor-Lock Data

Data compiled in the series of vapor-lock road tests conducted near Pawhuska, Okla., by the National Gasoline Association and the Western Petroleum Refiners Association are being studied and segregated by the field personnel prior to submission to the A.P.I. for correlation with other similar data collected.

Field work was completed on August 23 and although final results will not be known for some time, preliminary results revealed tendencies of the fuel systems of some motor cars tested to waste gasoline volume and a failure to take full advantage of the octane value of commercial grades of gasoline.

Road tests were made on most of the popular makes of cars and experiments were conducted with new methods and new testing equipment. Results of the tests will be made known in the meetings of technical groups this fall and winter.

California Production

Natural gasoline production in California during July was the same as in June, 40,000 bbls. daily, according to the Bureau of Mines report for that month. Stocks increased 30,000 bbls. during July and amounted to 2,703,000 bbls., which is an increase of 457,000 bbls. over July, 1936, stocks.

Daily average production of liquefied petroleum gases decreased from 1,925 bbls. to 1,867 bbls., of which 468 bbls. were produced at refineries in July. Daily average sales decreased from 1,987 to 1,930 bbls. Still gas production during July amounted to 2,142,154,000 feet, equivalent on a B.t.u. basis to 565,484 bbls. of fuel oil.

Tar Sand Development

McMURRAY, Alberta, Aug. 28.—International Bitumen Co., operating in the bituminous sand area north of McMurray, is reported producing 200 bbls. a day of light and heavy diesel oils, which are marketed in the north. Abasand Oils, Ltd., separation and refining plant is nearing completion.

Drilling Permits Extended

WASHINGTON, D. C., Aug. 30.—President Roosevelt signed the bill authorizing a two-year extension of permits allowing prospectors to drill for oil and gas on government reserves. The measure extends to December 31, 1939, prospecting permits which would have expired at the end of this year. Proponents of the legislation said extension of the permits would be "in the interest of conservation and orderly development of mineral resources."

Airplane view of United Gas Public Service Co.'s 140,000,000-foot absorption gasoline plant at Myrtis, in Rodessa field of Louisiana

Pipe Line Activity

Sink or swim—Houston Pipe Line Co.

Illinois Contracts

Pure Oil Co. has let a contract to the B. & M. Construction Co., of Oklahoma City, for 60 miles of line from Clay City, Ill., to Monticello, Ind. The line will consist of 46 miles of 10-inch and 14 miles of 8-inch. H. C. Price Welding Co., of Bartlesville, was given the contract to electric weld the line.

Third Outlet for Rodessa

SHREVEPORT, La.—Standard Oil Co. of Louisiana, pipe line division, has just completed a 4-mile extension to its Rodessa system into the Arkansas portion of the field, providing that area with its third pipe line outlet.

Magnolia Pipe Line Co. is also preparing to lay an extension in the area. East Texas Refining Co. and Gulf Pipe Line Co. both have lines into Rodessa, Ark., at present.

Tax on Pipe Line Oil Upheld

NEW ORLEANS, La.—U. S. District Judge Wayne G. Borah has upheld federal collection of taxes on oil moved through private pipe lines on privately owned property in a test case.

Line From Ezzell Field

SAN ANTONIO, Tex.—Right of way for a 12-mile pipe line has been secured by E. M. Jones of San Antonio, Tex. The line will be laid from the Ezzell field of McMullen County, Texas, to a railroad loading rack near Kittie. Mr. Jones controls all of the production in the Ezzell field, keeping several rigs active in developing the field.

Minnesota Gas Line

Northern Natural Gas Co. has awarded Truman-Smith Construction Co. of Eldorado, Kans., a contract for the construction of a 33-mile 8-inch gas line from Owatonna to Mankato, Minn. Construction will start around September 15. Wailes Dove-Hermiston Corp. has the contract for coating the line, and the coating will be applied at a central point along the line.

Louisiana Plant Being Rushed

SHREVEPORT, La.—Work is being rushed on the Arkansas Fuel Oil Co.'s natural gasoline absorption plant at Simsboro, La. Wet gas production from the Simsboro, Union Church and Driscoll areas of Lincoln and Bienville parishes, is to be handled through this plant. The plant is to have a 30,000,000-cubic foot capacity, and residue gas will be delivered into the Arkansas-Louisiana Gas Co.'s main transmission line from Monroe to Shreveport.

Activity in Venezuela

Evidence is mounting that Standard Oil Co. of New Jersey, Royal Dutch-Shell and Gulf are looking to Venezuela as the outstanding source of foreign crude production. Although there has been a minimum of information available on developments in eastern Venezuela intensified activity across southern Monagas, eastern Anzoategui and in the western part of Amacuro gives ample evidence that production of unknown caliber has been developed.

Representatives of the Venezuela government and of Royal Dutch-Shell are reported jointly considering a refinery site on the Paraguana Peninsula, the projection of the state of Falcon into the Caribbean Sea. The refinery prospect has no bearing on eastern Venezuela developments so far, but is in keeping with the government's year policy of compelling creation of a national refining industry. Since the Shell group is one of the most active concerns in obtaining additional acreage, it is assumed by observers the Lopez administration is demanding the same consideration exacted from Socony-Vacuum Oil Co., Inc., and Standard of New Jersey when they obtained large concessions last year.

There are approximately six wildcat tests active in the southern parts of Anzoategui and Monagas. All of the activity is by Mene Grande Oil Co., subsidiary of Gulf, and by Standard Oil Co. of New Jersey. Both companies have been particularly active during the past year in wildcat drilling programs in the two eastern Venezuela states.

Tribal Mineral Rights

WASHINGTON, D. C., Aug. 30.—President Roosevelt has signed a bill authorizing the reservation to the tribes of minerals in future sales of lands of the Choctaw and Chickasaw Indians in Oklahoma.

Secretary Ickes suggested the legislation, saying the Choctaw and Chickasaw Indians in Oklahoma own jointly about 22,000 acres of tribal lands exclusive of timber lands.

"Much of this area is now believed to be potentially valuable for oil and gas production, and the governor of the Chickasaw nation and the principal chief of the Choctaw nation have discussed the advisability of reserving the minerals to the tribes in future sales of their lands and are favorable to legislation to effect that purpose," Mr. Ickes reported.

The president also signed a bill providing for the manner of payment of taxes on gross production of Oklahoma. Whenever restricted Indian lands are subject to gross production tax, the secretary may cause the taxes due the state to be paid in the manner provided by state statutes.

New Sumatra Concession

Nederlandsch Koloniale Petroleum Maatschappij, operating subsidiary of Standard Vacuum Oil Co. in the Dutch East Indies, has acquired new territory between the Simpang and Batangoeng rivers in Sumatra for exploration purposes.

The Royal Dutch Shell unit in Netherlands East Indies, Bataafsche Petroleum Mij., has applied for a concession and privileges to drill for oil near Samarinda, Borneo, and also on the Martapoera plains near Soengai Raja.

Refinery Expansion

Shell to Build Unit at Martinez

LOS ANGELES, Calif.—Shell Oil Co. has asked for bids to cover the construction of a new topping unit which will replace a battery of several topping units at its Martinez refinery on San Francisco Bay. The new unit will be operated in conjunction with a modern vacuum unit which was installed recently, and will be designed with a high degree of flexibility to permit processing of various grades of northern California crudes. Gasoline and other light derivatives will be recovered by the new unit, and the bottoms will proceed to the lubricating plant. At the Wilmington refinery in the Los Angeles Basin the Shell company is building an experimental cracking unit.

Plan Siamese Refinery

NEW YORK.—The Siamese ministry of defense is planning construction of a 500-bbl. refinery at Bangkok, Siam, at a cost estimated between $350,000 and $375,000.

Building Louisiana Plant

SHREVEPORT, La.—Co-Service Oil, Inc., a newly formed company, is building a lubricating oil refinery in the Bellevue field, Bossier Parish, Louisiana. Production for the plant is to be obtained from the Premier Investment Co. of Fort Worth, Tex. Douglas McDonald is president of the company.

Bay Plant Nearing Completion

DENVER, Colo.—Bay Petroleum Corp. is nearing completion of its refinery just south of Denver. The plant will operate on high-gravity Oklahoma crude and consists of a 1,650-bbl. skimming unit and a 900-bbl. Dubbs cracking unit. Ampco Co. of Dallas, Tex., is building the plant.

English Refinery Under Way

NEW YORK.—Manchester Oil Refinery, Ltd.'s construction program at Trafford Park, a plan first announced during the early part of 1937, has been launched and the refinery is expected to be completed by next February.

Included in the refinery will be an Edeleanu solvent extraction and dewaxing plant for production of lubricating oils. Also a vacuum distillation unit capable of handling 2,000 bbls. of charging stock per day will be constructed.

The Manchester plant will be situated at the junction of the Bridgewater and Manchester ship canals.

Oil News from Foreign Lands

Mexican Production

Crude oil production in Mexico the first six months of 1937 totaled 23,890,000 bbls. (3,798,190 cubic meters) according to a final report of the government's petroleum department. This total is a slight increase over the same period in 1936 despite a reduction in June output. The production by months was as follows;

	Output (bbls.)	Value (pesos)
January	4,233,635	15,603,308
February	3,922,929	14,774,257
March	4,307,952	16,771,327
April	4,249,839	16,577,500
May	3,837,950	14,970,442
June	3,338,311	13,027,798
Total	23,890,616	91,724,632

Eight wells with an initial production of about 2,000 bbls. daily were reported completed the first six months of this year with one gas well showing commercial production. Seven tests were abandoned as dry.

Two of the completed wells were located at Altamira, Tamps and two at El Plan, Minat, Ver. One each was reported for the following areas: Camargo, Tamps; Panuco, Ver.; Rancho Abajo. Ver.; Cuichapa, Ver., and Quebrache, Ver.

Points at issue between labor unions and private oil companies in Mexico are in the hands of the government's labor board awaiting a formal hearing. At a hearing date last week, representatives of the oil companies appeared prepared to give testimony denying the official investigating committee's findings as to their ability to pay higher wages and other social benefits were in keeping with facts.

Representatives of the labor unions failed to appear for the hearing as did members of the labor board. It was assumed in Mexico City and in this country that the labor board was awaiting return of President Cardenas to the capitol before throwing the issues involved open to discussion.

Meanwhile, private companies in Mexico stood pat on their assertions that withdrawal from the country might be forced upon them if the government orders assumption of the increased operating costs recommended by the investigating committee.

In press dispatches from England it was stated the British government is considering the feasibility of lodging a protest with the Mexican administration. No reports have come from Washington over the United States' official attitude with regard to the question in Mexico.

Shell in Guatemala

Compania Guatemalteca de Petroleo Shell, subsidiary of the Royal Dutch-Shell group organized to seek a concession totaling approximately 7,600,000 acres in Guatemala, is reported to be ready to start expenditure of $750,000 for exploration if the concession is granted.

The area covered includes practically all of the region of Peten with exception of a zone 15 miles wide following the border together with parts of the Departments of Izabal and Alta Verapaz.

As soon as necessary patents are granted, the Shell company plans to start exploration and mapping by airplane. The Peten region is extremely difficult of access because of its low, marshy nature and jungle vegetation. In view of the amount Shell is understood prepared to spend for exploration, it would appear the company has some evidence work will be successful.

Two other requests for exploratory concessions, both from Guatemalans, have been entered with the government. One application covers approximately 100,000 acres included in the region immediately south of Lake Izabal along the line of the International Railway roughly from El Rico to Morales. The second area is north of Lake Izabal in the district between Livingston and El Estor and covers approximately 170,000 acres.

Japanese Demand

The sharp increase in demand for petroleum in Japan, even prior to the current Sino-Japanese military maneuvers, caused authorities to increase the sales quotas for all products approximately 14.7 per cent. Of the increase in total 1937 quotas, 22.3 per cent were assigned to national refiners and 8.7 per cent to importers.

The revised quotas for various products are shown below in kiloliters:

GASOLINE	
Total 1937 quota	1,360,000
Sales quota for refiners	772,000
Sales quota for importers	587,000
KEROSENE	
Total 1937 quota	165,000
Sales quota for refiners	110,000
Sales quota for importers	54,000
DISTILLATE	
Total 1937 quota	170,000
Sales quota for refiners	170,000
Sales quota for importers	.....
LUBRICATING OIL	
Total 1937 quota	300,000
Sales quota for refiners	271,000
Sales quota for importers	29,000
HEAVY FUEL OIL	
Total 1937 quota	1,750,000
Sales quota for refiners	445,000
Sales quota for importers	1,305,000

Bahrein Distribution

Assertions in the British press that Bahrein Petroleum Co., Ltd., through the California-Texas Oil Co., is planning to start distribution of its products in England through Petroleum Storage & Finance Corp., have been denied in a formal statement by James A. Moffett, chairman of the California-Texas board:

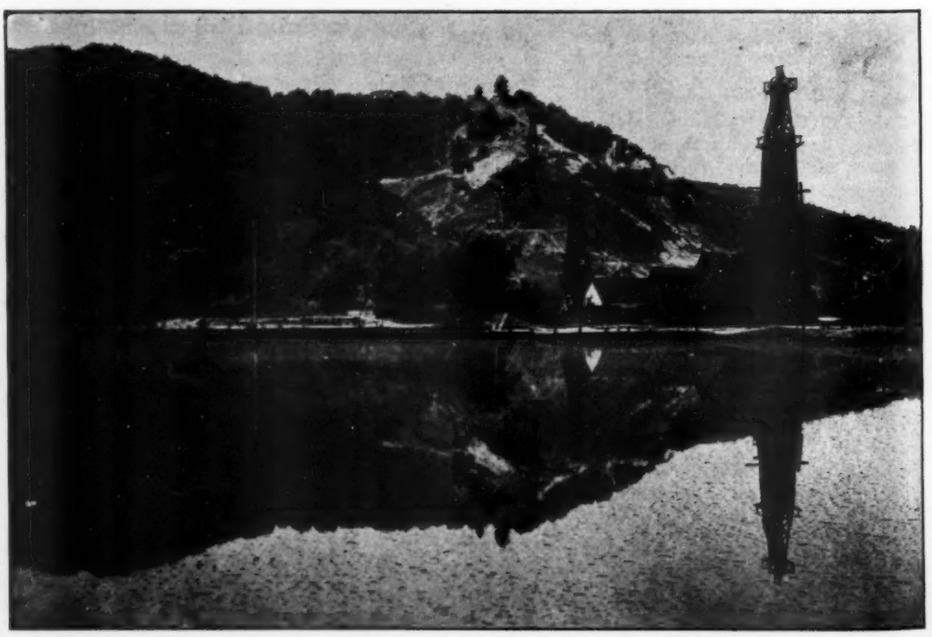
"From time to time various articles have appeared in the British press regarding the activities of the California Texas and Bahrein Petroleum Companies.

"With the development of production on Bahrein Island it was natural to refine this crude oil at the source. Accordingly, the construction of a refinery of 25,000 bbls. per day capacity was undertaken. This plant is now near completion.

"It was natural that in this refinery operation we should produce both fuel oil and diesel oil. It was therefore necessary to establish bunkering facilities at points geographically near the refinery.

"As our supply is limited it is unnecessary for us to compete keenly for business, and production has been disposed of in a natural, orderly manner. As Bahrein is the nearest point of supply to western India it was natural and normal that we should establish distributing facilities for the full line of our products in that market, particularly in view of the fact that Burma's production is insufficient to supply Indian requirements, and that heavy imports have to be made from other producing centers not geographically as well located to supply the Indian market as Bahrein—that is, Russian production. Furthermore, with increase of domestic demand in Russia and failure to maintain her export position, and the decline in Rumania as well, a natural normal market should be secured for Bahrein production without any disturbance to normal marketing conditions.

"At such time as Bahrein Petroleum Co. and the California Texas Oil Co. may have crude oil and/or refined products available for Continental Europe or Great Britain it would not market through Petroleum Storage & Finance Corp., Ltd., or through any other distributing agency, as it must be remembered that the Texas Corp. has distributing facilities in Great Britain and throughout Continental Europe, and, as part-owner of Bahrein Petroleum and California Texas Companies, it would be natural and proper that they would handle the distribution."



Near Campina, Rumania

ENGINEERING AND OPERATING SECTION

Presenting modern developments in operation of producing properties, refineries and gasoline plants, and pipe lines, including petroleum research in the field and laboratory

This Week

VARIETY OF WATER-FLOODING METHODS USED IN SOUTH KANSAS PROJECTS—By Paul Reed . . . . **Page 40**

Operators in the Mid-Continent differ in opinion as to the proper technique of water-flooding. Six projects in southeastern Kansas exemplify the wide variance of methods used in secondary recovery operations.

COMPACTNESS OF DESIGN FEATURE OF LOUISIANA UNITIZED ROTARY—By Mitchell Tucker . . . . . **Page 45**

Modern rotary equipment is featured by lighter weights, compactness and deeper drilling capacities. A new design unitized rotary with a rated capacity of 4,500 feet has been placed in service in Louisiana.

NEW METHOD FOR TAKING CORE SAMPLES AT WELL—By L. S. Panyity . . . . . **Page 46**

To overcome oil losses encountered in handling cores, a core receptacle has been devised that is also used as a retort. The container is cheaply made and allows highly accurate results to be obtained.

WILSHIRE COMPLETES FIRST POLYMERIZATION UNIT ON WEST COAST—By T. P. Sanders . . . . . **Page 48**

Wilshire Oil Co. has placed in operation at its Norwalk, Calif., refinery a new polymerization unit, the first erected on the West Coast. Flow of cracked refinery gases through the unit is described.

ILLUSTRATED OPERATING IDEAS . . . . . **Page 49**

Lubricating oil cooled by passing through heat exchanger. Convenient pipe line markers. Winch driven by automobile crankshaft. Gas line suspended at creek crossing. Gas pressure operates pump.

AVERAGE SULFUR CONTENT OF TEXAS CRUDES REDUCED—By W. L. Nelson . . . . . **Page 50**

The average percentage of gasoline contained in Texas crudes shows a substantial increase in the past ten years, while the average percentage of sulfur shows a great decrease. Other properties discussed are the average A.P.I. gravity and percentages of each type of crude produced in the past ten years.

FIXED IGNITION LAG METHOD OF TESTING DIESEL FUELS—By J. S. Chandler . . . . . **Page 53**

A method of determining the ignition quality of diesel fuels is described. Known as the Penn State method, the test has proven to be a convenient and accurate measurement of performance of a fuel in an engine.

QUESTIONS ON TECHNOLOGY — By C. K. Francis, Ph. D. . . . . . **Page 57**

Thurston friction machine for testing lubricating oils. New method of rating antiknock value of gasoline. Stoddard solvent specifications to include 50 per cent requirement. Production and use of gas in the Panhandle. Hypsometer for determining boiling points.

PROBLEMS FROM READERS—By L. G. E. Bignell **Page 58**

Locating oil and gas in place. Data on drilling costs. Date of discovery and peak production of some Oklahoma fields and East Texas. Aerial survey notes.

Water intake well on McIntyre and Travis project where injection recently started

Variety of Water-Used in South

By PAUL REED

The variety of water-flooding practices adopted on projects developed this summer in the vicinity of Garnett, Moran and McCune, Kansas, calls attention to the experimenting involved in this method of producing oil in the Mid-Continent. The projects discussed in this article are in an area which extends through Anderson, Linn, Allen, Bourbon, Neosho and Crawford counties; flooding being done in a tier of counties adjoining to the southwest is regarded as belonging to another area. The most active spot, in the counties considered, is an 8-mile strip running north from 5 miles east of Moran, where three companies are developing three floods. Methods differ between companies as to ways of handling supplies of fresh water and brine and as to the manner of drilling and equipping wells.

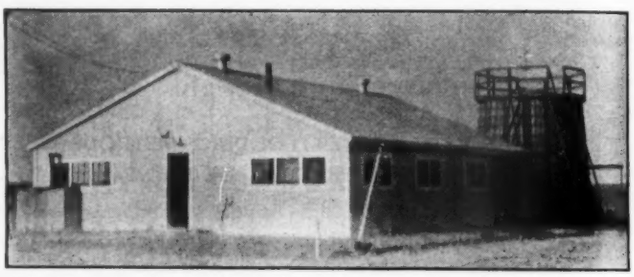
Present development follows two years of extensive studies of the possibilities of the shoestring sands in this area for flooding. It was recognized that these sands had the requisites of good flooding formations since many of them averaged more than 25 feet in thickness of even sand body with high saturation. Being laid down as they were in the beds of rivers running north into the sea in Pennsylvanian times, they are narrow bodies of sand requiring fewer water intake wells than needed in flooding a blanket sand; this and the fact that these sands are found at shallow depths between 350 and 750 feet offer the possibilities of economical development.

Core analyses show that permeability is commonly found to be ranging from 20 to something over 100 millidarcys, averaging in a large number of cases between 25 and 45 millidarcys; average oil content as high as between 500 and 600 bbls. per acre-foot are reported in a number of cases. And there are some instances where they have been reported to run higher. Within the reservoir there is an absence of pressure exerted under natural conditions by either gas or water. Operators who have been studying the area have been steadily acquiring the desirable properties available. Floods getting under way there this summer are in the nature of tests of a fraction of the holdings which operators have been accumulating.

In this area from Anderson and Linn to Crawford County, there are altogether six active flooding projects, each project being operated by one of the following operators: Brundred Oil Corp., Converse Oil Co., McIntyre & Travis, Oil Recovery, Inc., Shell Petroleum Corp., Streeter Oil Co. and Texas Co. Most of the projects have between 7 and 11 wells and at present they may be regarded as all experimental. Most of the work has been done this year. Differ as they do in a number of details, the usual practice in planning a project is to adhere to a well pattern which is either a true 330-foot 5-spot or a modification of it with 250-300-foot spacing. Water intake wells are equipped with tubing cemented on the sand in most cases, tubing sizes being 1¼, 1½ and 2 inches; in these instances no casing is used. However, on two properties tubing is not used for water intake wells; on one of these 6⅝-inch casing is used and on the other 4-inch casing. Water supplies are drawn from creeks, ponds and shallow sands. On one property preparations are being made to use brine from the Mississippi lime. Water treatment by lime and alum is carried on by both the conventional equipment and also by the type of plant known as the accelator.

On certain of these properties, delayed flooding is practiced. Delayed flooding is a term describing the method of operating, where old oil wells are plugged and new oil wells are not drilled into the sand until six months or more after the flooding has been going on through the intake wells. A modification of delayed flooding is being practiced in this area, where the old oil wells are not plugged but they are not pumped during the early months of flooding. In certain cases there, delayed flooding is not practiced and the oil wells are pumped from the beginning of flooding operations.

Most wells in the area are drilled by spudders for 75 to 90 cents a foot. On a 640-foot well, drilling time is four days with two days required for rigging up. Some rotary wells have been drilled with coring rigs. The usual drilling practice in the Moran district is for spudders to start with a 10-inch hole and set an 8¼-inch water string at about 150 feet and drill to the sand with an 8-inch hole. It has been customary to drill a 10 to 15-foot pocket below the sand, although pockets 25 feet deep and deeper are used by some producers in this locality. Some flooders drill 10-foot pockets.



Brundred Oil Co.'s plant south of Garnett

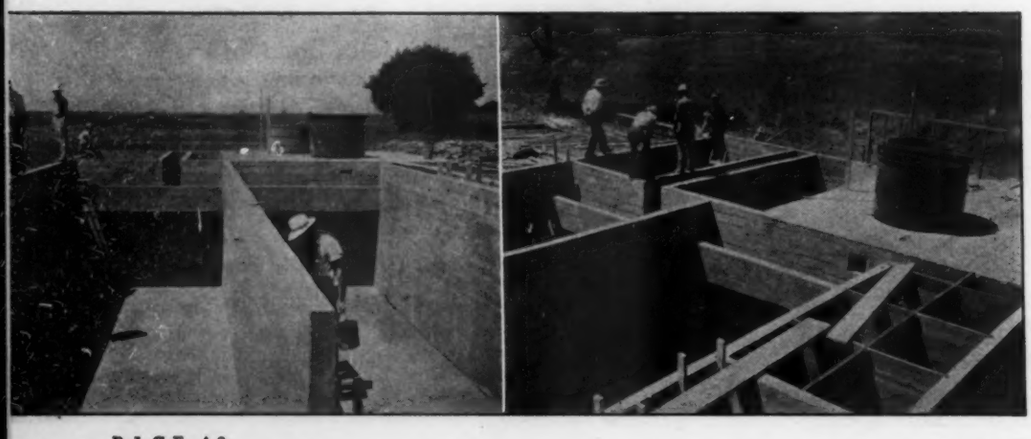
Before giving data on individual projects a summary may be appropriate showing the distinctive characteristic of each. In little over a year, systematic flooding, starting in the north end of the area, has spread south. The pioneer project of flooding on any scale is that of the Texas Co. in Linn County where water injection began in May, 1936. Brundred Oil Corp. started flooding at the end of the year south of Garnett; in the north end of the Moran area the Streeter Oil Co. started flooding in July of this year. Four miles south, McIntyre & Travis have completed their plant and began the injection of water in August. Four miles farther south the Shell Petroleum Corp. is getting ready to inject water some time in the fall. Forty miles south in the McCune district of Crawford County, Converse Oil Co. and Oil Recovery, Inc., started this year.

The most concentrated activity this summer has been in the Moran district where each of the three projects exemplifies certain trends in flooding practice. The Streeter plant looks as though it had been transplated from Pennsylvania; the McIntyre-Travis plant shows the influence of what has been learned by observing Nowata practices; the Shell project has adopted features of operation found to be successful this year in the Sedan district. Both the Texas and the Shell companies are making preparations for pumping wells with individual electric motors. Delayed flooding is practiced on some properties but not on all.

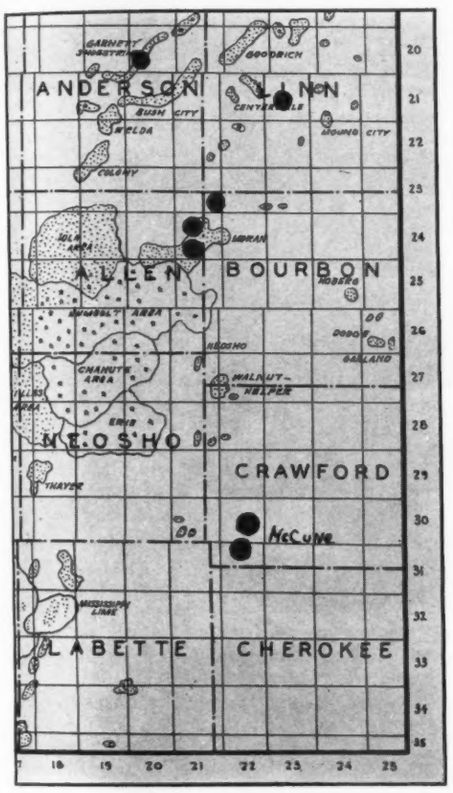
Conspicuous points in development and operation are given for each plant separately.

The McIntyre & Travis project is located on a

Secondary settling basin (at left) and mixing tanks and filters used in Shell Petroleum Corp.'s water-treating plant. Drilling of water wells began last March



Flooding Methods Kansas Projects



Location of six water-floods which are being actively developed in southeastern Kansas

640-acre property where preparations have been made to flood a shoestring sand 2 miles long and between 800 and 900 feet in width. Top of the sand is found at 640 feet and average thickness is 25 feet with a maximum thickness in some places of more than twice this depth. Most of the shale breaks are in the upper 15 feet; the rest is reported as being a good body of even, unbroken sand. The small amount of water in the sand is believed to be the result of leaky casing.

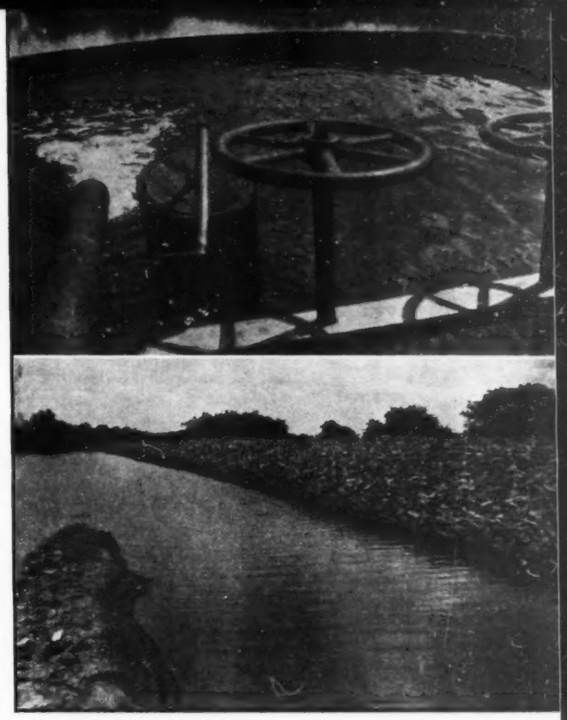
This year eight water intake wells have been drilled for the initial flooding operation. These have been spaced on a five-spot pattern in such a way as to fit the existing old producing wells with a distance of approximately 300 feet between water wells. Oil wells will continue to be pumped throughout flooding. No drilling of oil wells is contemplated now. Water wells are equipped with 6⅝-inch casing, set 1 foot in the producing part of the sand and cemented with 25 sacks of cement. Casing is used instead of tubing in case it might be desirable to clean out.

Water Distribution

Water is distributed to intake wells from a 6-inch main line running the length of the property with 4-inch laterals branching to each well. Instead of having meters placed at the wells, meters are concentrated at the points where laterals branch off. At each of these points there are two meters covered by a meter box. An earthen dam has been built to impound a water supply reservoir covering 25 acres with a run-off from 7 to 8 square miles. The treating plant, of the accelator type, employs a forced draft blower in an inclosed tower for aeration. A 72-inch pressure filter rated at 65 gallons per minute is installed at present and it is anticipated that a maximum of four filters will be used later. Water is pumped by a 5 by 8 by 18-inch triplex pump, belt connected through a jackshaft with a 165-hp. gas engine. There is a 50 kw. generator for lights and for the motors driving the chemical feeders.

The Shell Petroleum Corp.'s Smith lease, 5 miles east and 1 mile north of Moran, will be developed with a flood covering 150 acres. Drilling of water wells began in March and it is anticipated that actual flooding will start sometime in the fall. Old wells are being plugged. The spacing pattern is described as a five-spot with five wells across a quarter section. A 10-foot pocket below the sand is drilled in intake wells; 4-inch casing is set in the pay sand and cemented with 15 sacks of cement. Intake wells are shot with 1 quart to the foot.

Flooding is to be done with water from a well drilled 1,150 feet to the Mississippi lime in the northwest corner of the property; the well has a



Acetylene can used for a float to control a regulating valve on a water tank at Streeter Oil Co.'s project (at top). Lower view is of reservoir supplying water to McIntyre and Travis project near Moran, Kans.

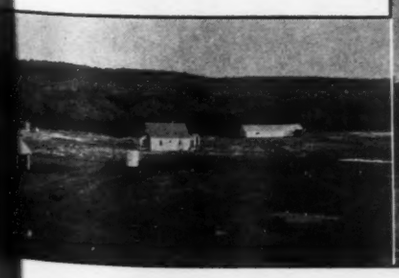
head of 750 feet. The water contains a small amount of sulfur. Treating of water is to be done in a plant built along the lines of a conventional city treating plant. Two concrete basins are to be used. They are placed on the side of a hill in order to get the benefit of gravity flow. The highest one, a roughing basin for preliminary settling, is 60 by 40 by 10 feet.

Water enters a trough along the northwest wall of the basin; from there it flows around a baffle, half way down the middle of the tank and under a weir close to the southwest wall. From there water flows by gravity to the secondary settling basin, 60 by 26 by 11 feet, at one side of which is a small mixing chamber 14 by 6 by 11 feet. Before entering this, chemicals are mixed by a paddle driven by an electric motor. From the secondary settling basin, water flows to two open type sand-and-gravel filters, contained in two concrete pits, from which it will flow into the clear well sump. Water used to back wash the filters will be collected in a wash water sump from which it will be returned to the mixing chambers. Both sumps are concrete and each is 20 by 10 by 6 feet in dimensions.

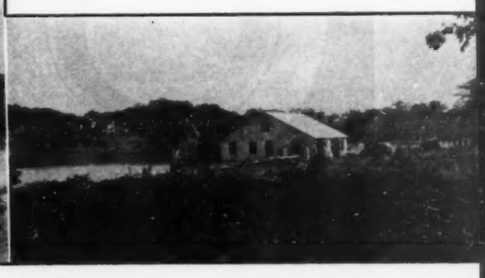
Water from the clear water sump will be pumped by centrifugal pump to two 1,600-bbl. wooden tanks, on ground slightly above the plant. Water will be pumped to the wells by a 7 by 12 triplex pump driven by an electric motor getting current from a high line. Compressors are installed for bringing water from the bottom of the Mississippi lime well by air-lift to the preliminary settling basin. Wells will be pumped from central power operated by elec-

McIntyre and Travis accelator treating plant in Moran area

Texas Co. project in Linn County



Streeter Oil Co. plant, Moran area



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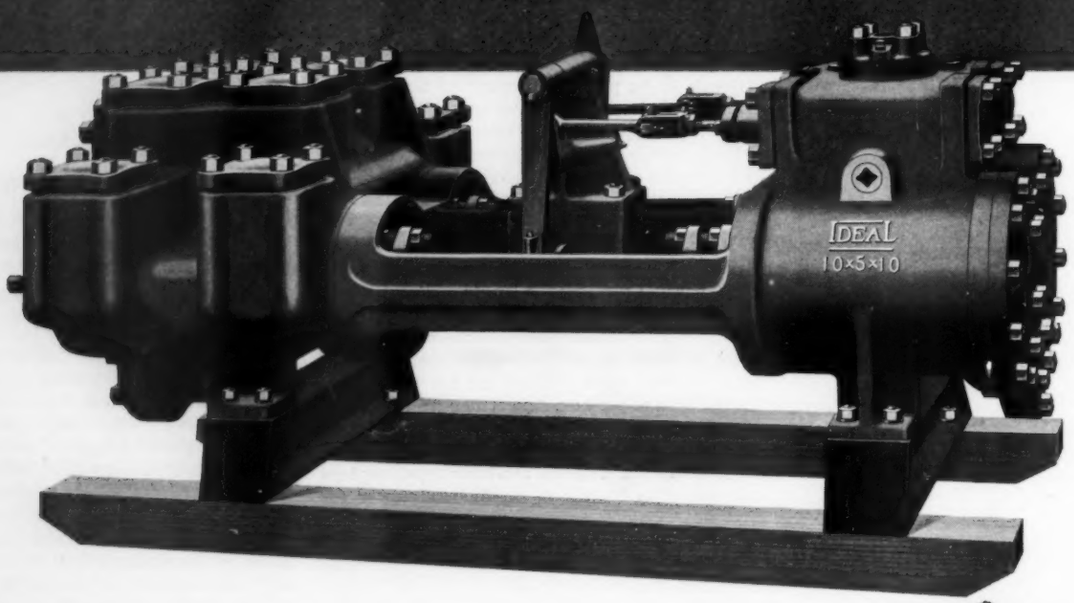

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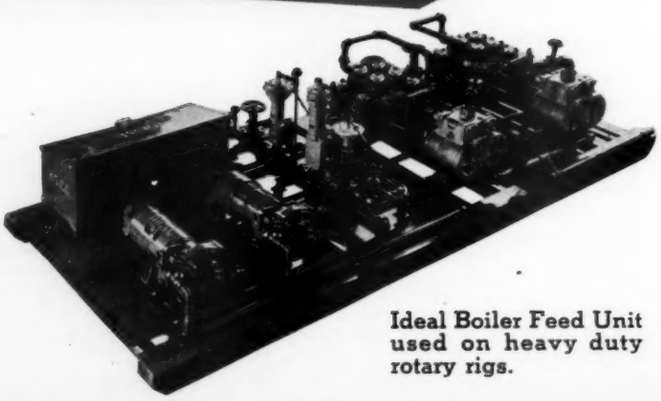

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tricity. The water system was designed by Shell's construction engineers based on a thorough investigation they had made of water-flooding requirements.

At the end of July, the Streeter Oil Co. started to flood part of the property amounting to more than 600 acres acquired in the vicinity of Moran. In this initial project, flooding is done through seven intake wells. The sand has an average thickness of 25 feet. Water goes to the sand at intake wells through tubing set on the pay sand with a flood packer and cemented. Intake wells are shot. A dam impounds the water supply. Equipment for treating with lime and alum is of a conventional wooden tank type. Mixing is done in a small tank by means of a washing machine paddle driven by a belt connected to the jackshaft. Water is pumped into the distributing lines at 550 pounds pressure by a 4¾ by 12-inch triplex pump. Power in furnished by a 180-hp. gas engine.

Brundred's Project

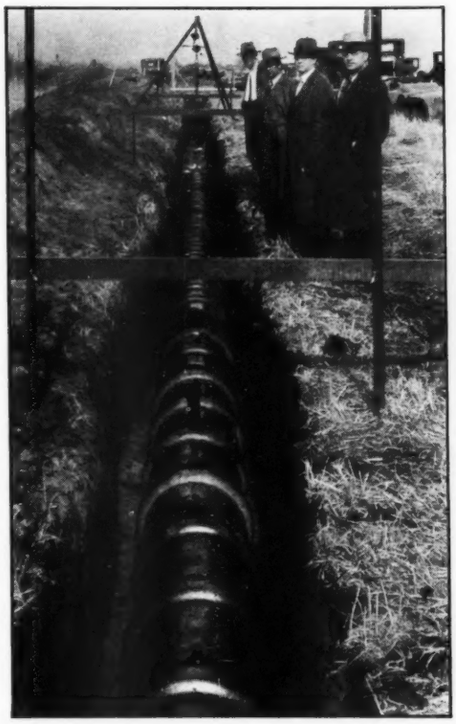
The Brundred Oil Corp. is flooding 40 acres of shoestring sand south of Garnett, the sand being 700 feet deep and 30 to 40 feet thick. Flooding started in December, 1936. This is a delayed flood carried on without plugging old wells. The pattern is one devised for existing shoestring conditions, special regard being given to the effect of old holes. Spacing is between 250 and 300 feet. As many of the old wells as possible have been used. Cementing is done with 10 to 20 sacks, depending on whether a new well was drilled or an old well was utilized. In completing wells no pocket is drilled. Wells are shot. Water is furnished by the city of Garnett and is filtered in a pressure filter, no chemicals being used. It is planned to test the possibilities of flowing some of the wells and it is likely that some will be flowed and some will be pumped.

The Texas Co. flood is carried on 5 miles east of Centerville in Linn County, where it was started in May, 1936, as a small experiment. The property is located on the side and bottom of a steep ravine, through which flows a creek serving as the water supply for the project. Following the preliminary experiments, plans were made for conducting a flood on a sufficient scale to get significant results. Most of the 11 intake wells have been drilled this year. There are 23 producing wells on the property. The sand has an average thickness of about 25 feet and it occurs at a depth of 375 feet. Altogether the property consists of 40 acres on a shoestring about 1 mile long.

The five-spot pattern used has been staggered to fit conditions; spacing is about 300 feet between

Meter box for two meters on distributing system of the McIntyre and Travis project

water wells and water is injected through 2-inch tubing. Water is treated in two 1,600-bbl. wood tanks. Chemicals have been mixed by dumping in the tank and stirring with compressed air, but a change is being made in this procedure and mechanical chemical feeders are now being installed. Improved facilities for the pumping of water to the plant will soon be available since provisions are being made for lifting the water with well pumps driven by electric motors, furnished with current from a generator driven by a 50-hp. oil engine. The company considers that as a result of



Salt water line made from 21-inch glazed clay pipe being laid in a field near Wichita, Kans. An asphalt compound is used to join the pipe together

the work done this year the flooding of the property is just beginning now.

A new company, Oil Recovery, Inc., with field operations directed by R. R. Hawkins, formerly chief engineer for the Texas Co. at Tulsa, has been acquiring properties in Oklahoma and Kansas. The first flooding is being undertaken this summer on part of 880 acres on a shoestring 2 miles long, designated as the McCune block. It is located near the town of McCune which is 12 miles east of Parsons. The flood will start with 10 intake wells. Depth to the top of the sand is 320 feet and sand thickness is between 25 and 30 feet. The sand body is quite even with an absence of shale laminations. There is some broken sand on top with small stringers of highly saturated sand. Average permeability is 30 millidarcys.

Five-Spot Pattern Used

The pattern is a five-spot, staggered and pulled out so that distances between water wells vary from 175 to 250 feet. No pocket is drilled below the sand. Water wells are equipped with 1¼-inch tubing, cemented. Oil wells are equipped with 2-inch tubing cemented on the sand and equipped for pumping with an insert pump. A three-quarter inch bleeder is connected with the lower part of the tubing to provide release for gas. Both oil and water intake wells are shot with one quart to the foot.

Water is supplied at present from a shallow sand brought to the surface by air lift. Treating plans are to be worked out later. This property is being drilled up for the first time and therefore flooding is part of the method of primary recovery. Wells can be drilled in three days. Wells drilled for water intake are capable of producing 15 and 25 bbls. at first, but decline quickly because of the absence of reservoir pressure.

Adjoining the Oil Recovery, Inc., property on the same shoestring are properties of the Converse Oil Co., where operations are spoken of as an experimental flood. Nine water wells have been drilled in a regular five-spot pattern. Water is brought to the plant by air lift and further aerated. In the water treatment sodium aluminate is used as a flocculent.

In conclusion it may be said that the means employed in the southeastern counties of Kansas give a cross section of some of the differences of opinion held by operators in the Mid-Continent where the technique of flooding highly permeable sands is in the process of development. Experiments conducted on certain properties with multiple packers and other means of improving the effectiveness of flooding are likely to lead to increased yields which will justify raising the estimates of recoverable oil, due to flooding, above the figures now considered reasonable.

Mid-Continent Oil Men Attend Montana Asphalt Conference

The Mid-Continent oil industry will be well represented at the Montana National Bituminous Conference at Glacier Park, Mont., September 7, 8 and 9. The conference has been combined this year with the National Road Oil and Asphalt Congress formerly held in Tulsa.

Among the oil men on the program are Emby Kaye, Skelly Oil Co., Tulsa; H. G. Nevitt and L. C. Krchma, Socony-Vacuum Oil Co., Kansas City; R. N. Traxler, Barber Asphalt Co., Maurer, N. J.; Raymond Harsch, Shell Oil Co., San Francisco; J. J. Allinson, Lion Oil & Refining Co., El Dorado, Ark.; B. E. Gray, the Asphalt Institute, New York; D. D. Williamson, the Asphalt Institute, Dallas; J. E. Buchanan, the Asphalt Institute, San Francisco, and G. E. Everett, Western Petroleum Refiners Association, Tulsa.

Other Mid-Continent oil men who will attend the conference include A. V. Bourque, Western Petroleum Refiners Association, Tulsa; C. O. Wilson, Cosden Oil Co., Fort Worth; E. E. Scholer, Shell Petroleum Co., St. Louis; George M. Mullins, Skelly Oil Co. and Frank S. Gilmore, the Asphalt Institute, Kansas City.

Thirty states, two provinces of Canada and one of Mexico are represented on the program by engineers or asphalt technologists who will discuss the subjects of research correlation and bibliography; fundamentals of bituminous construction; practical design and construction of bituminous surfaces, and maintenance of bituminous surfaces.

"Petroleum Technology in 1936"

A book of 326 pages recently published by the Institution of Petroleum Technologists summarizes in a comprehensive manner the developments made in the petroleum industry during the year 1936. All sections of the industry are included, some of the subjects are: geology, geophysics, drilling, transportation and storage, ocean transport, refining, cracking, testing, and utilization.

The wide scope of the book is indicated by the inclusion of lengthy chapters on coal and shale carbonization, motor benzol, hydrogenation, synthetic fuels, diesels and automobile engines. This volume is the contribution of more than 20 well-known authorities. A valuable feature is the review of petroleum literature and extensive references, under each subject, enabling the reader to readily locate the complete details.

This book may be obtained upon payment of 8s $(2) from the Institution of Petroleum Technologists, Aldine House, London, England.

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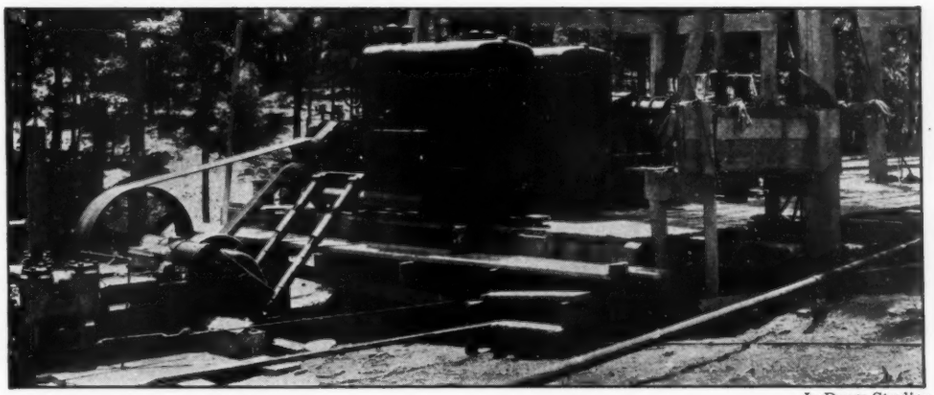
Compactness of Design Feature of Louisiana Unitized Rotary

By MITCHELL TUCKER

The trend in rotary rig design is definitely toward compactness, lighter weights, and deeper drilling capacities.

First portable drilling units, some of them truck mounted, had maximum rated capacities of from 2,000 to 2,500 feet. Their durability and economy was established quickly by continued service, well after well, and it is not uncommon to find some of the early units still in operation that have almost 100 or more shallow wells to their credit. Gradually, the newer design portable outfits are closing the gap between the capacities of early units and the conventional heavy rotaries until today drilling to 4,500 or 5,000 feet is not considered impractical for the modern portable rotary drilling rigs.



LeDoux Studios

Overall view of unit showing slush pump setting and hook-up

Two Engines Used

A new design of portable and unitized rotary, having a maximum rated capacity of 4,500 feet, with two 110-hp. gas or gasoline motors, has been put in service in central Louisiana developments. Its use of ball-bearings, alloy steel where needed, light weight and compactness of design, are the principal features presented. By the substitution of 150-hp. motors, the maximum drilling depth can be extended to 5,500 feet in hard drilling formations.

Briefly, the unit consists of motors, clutches, and drawworks mounted on one set of 12-inch 42-pound "I" beam skids, 16 feet long and 17 inches wide. The rotary table is chain-driven either from single or compounded motors, while the slush pump is 12-groove V-belt driven off the clutch pulley from one motor, and can likewise be compounded to operate off of both motors if desirable. The entire weight, with motors and less slush pump, is approximately 17,000 pounds. Slush pump itself weighs about 11,000 pounds. It is lubricated and ball-bearing mounted throughout.

The growing use and application of portable rotary drilling rigs has established the gas, gasoline, or diesel motors as reliable sources of power for handling the drawworks and slush pump loads.

Operate on Gas or Gasoline

To add to the adaptability of the gas or gasoline motors under all conditions, they are equipped to utilize either type of fuel. In this particular area, where there is no cheap natural gas available, gasoline is used. The special manifolding equipment is included, however, for operating on either natural or manufactured gas should the rig later be moved into an area where this would be desirable. A down-draft carbureting system is used to secure minimum fuel consumption per horsepower developed. Under full-load conditions this type of engine is designed to consume about 3 gallons of gasoline per hour, or 72 gallons per full operating day. Considering that five full days' operating time for both motors is required to drill to the 2,500-foot level, set casing, and complete, the total fuel cost per well would be $144 at 20 cents per gallon for gasoline delivered. In this particular unit the two 110-hp. 6-cylinder gasoline motors are connected in tandem, offering a maximum speed of 1,400 r.p.m.

Through the use of clutches and a 1-inch, triple roller chain, they are compounded. Power from the motor clutch assembly to the transmission drive is through 1-inch triple No. 434 roller chain, 63,600 pounds tensile strength. From the transmission to the line-shaft is the same, and from transmission to rotary-shaft a 1¾-inch double No. 474 roller chain with a tensile strength of 90,000 pounds is used. From the line-shaft to drum-shaft drive is the same as the latter.

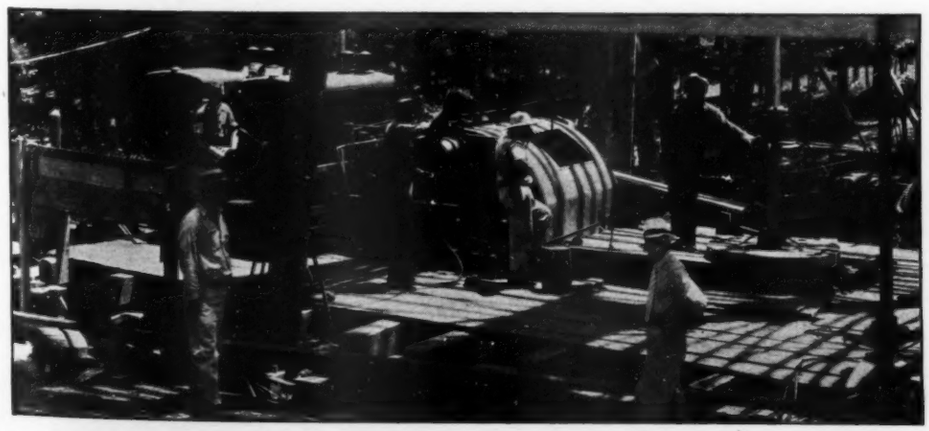
Alloy Steels Used

The drawworks is mounted on the front end of the unitized rig. All shafts are made of chrome nickel steel, S.A.E. 3140, heat treated. The drum-shaft is 5⅞-inch, line-shaft 3 11/16-inch and rotary-shaft 3 11/16-inch in diameter, all mounted on self-aligning ball bearings. The drum itself is cast steel, with brake diameter of 42 inches, 9 inches wide, flanges 44-inch O.D. and 18-inch drum core 32 inches long, keyed to the drum-shaft with 1¼-inch key.

The drum speeds with motor running at 1,400 r.p.m, operating with transmission in first low gear, 45 r.p.m.; second gear, 78 r.p.m.; third gear, 155 r.p.m., and fourth low gear 272 r.p.m. Eight line speeds are provided. For single line travel on first rap of line on the drum, with motor turning at 1,400 r.p.m. (maximum), line speeds range from a maximum of 120 feet per minute in first low gear, to a maximum of 1,050 feet per minute in fourth high gear.

Skids or mountings for the motors and drawworks have connections at the motor end for two 4-inch adjustable jack-post screws for anchoring the slush pump. Power for driving this unit is taken off the motor transmission, either from one motor or in compound, through a 12-groove V-belt drive. An idler is welded onto the unit mounting, having lubrication.

In rigging up such a unit arrangements are made where possible to have the motor end of the



Drawworks and the two 110-hp. motors are mounted on one skid to gain greater portability

unit facing a point suitable for slush pump setting, and also near the place where working mud pit is to be dug.

The selection of pump size and capacities must, of course, be conformable with conditions. Where formations are to be penetrated requiring large flushing volumes, liner size can be increased. Where sandy sections are to be drilled, which have an abrasive or detrimental effect upon pumps, tool joints, or bits, adjustments must also be made. For ordinary conditions, however, rigs of this size designed for 4,500-foot drilling, usually use a pump with 6-inch liner and 12-inch stroke, having a maximum pumping efficiency at 60 strokes per minute, and developing a maximum discharge pressure at the pump of 500 pounds.

A portable gasoline-operated, electric generating unit is used for lighting purposes. Recent reductions in weight and improvements in lighter duty traveling-block, hooks, swivels, and rotary-tables for such units have also added to their economical operation and adaptability for wider ranges of operation.

In actual operations, a maximum rotary-table speed of about 200 r.p.m. can be developed. The hand-operated line feed is sufficiently sensitive to permit close control over the weight on bit where desirable, although in 2,500-foot drilling where the formations penetrated are as hard as those of central Louisiana, usually a weight approximating the maximum is carried. Full length drill stems are handled without strain, due to the reserve capacity. To depths of 2,500 feet no more than six lines are ever used, but an increase could be made if conditions warranted. Due to the wide variations in line travel through eight speed ranges, round trips can be made in minimum time, which is an important improvement over some early type portable rigs.

In this particular territory, only a short surface string and production string is set. Fish-tail bits are used to about 1,900 feet where the chalk rock is encountered; from there down rock bits are employed.

The rig illustrated by the accompanying photographs is owned by T. L. Benson, contractor of Shreveport, La., and is drilling at Lyons & Neely No. 1 J. P. Brown, section 16-10-11, DeSoto Parish, Louisiana.

Trend in Highway Construction

The highway industry, more than many others, is in intimate touch with the daily lives of all of us. As an industry, the business of highway building, invests more than a billion dollars annually. It depends upon and supports hundreds of other industries; provides a livelihood for hundreds of thousands of families.

In what direction is the highway industry headed—toward what goals is the professional engineer leading us?

Primarily the engineer is seeking better materials, more economical materials, more advanced methods, more skillful technique. He forsees an adaptation of the mass production methods of other manufacturing industries—the possibility of spreading results over greater areas for each dollar of investment. He seeks to make less expensive materials do the work of today's expensive materials. He is forced to that end through economic necessity.

The trend is evident in the marked increase of the low-cost type highway—the asphaltic and bituminous surface. It is seen in actual figures in the report of the United States Bureau of Mines which records a 30 per cent increase in asphalt last year compared with 1935 and a 31 per cent increase in the sales value of the product.

New Method for Taking Core Samples at Well

By L. S. PANYITY
Petroleum Geologist, Bradford, Pa.

The first core of an oil sand in the Bradford field was taken in 1924 (a diamond drill core) under the supervision of the writer. This undertaking created considerable interest among oil operators and was the inception of commercial core-analysis.

Commercial core-analysis therefore does not date back further than about 13 years; it is practically a new profession and in such a case newer methods are bound to be brought out for the improvement of core-analysis. At first only porosity and saturation results were available. The writer has at various times pointed to the difference between porosity and permeability.* The first method for this purpose was the screen or grain-size analysis. This method gave excellent results with soft-sands, but where a hard consolidated rock was handled it was difficult to separate the grain aggregates. Finally the present pressure method which gives results in "Darcys," came into use and is probably more generally accepted than any of the other methods.

The receptacle in use as a retort

For saturation tests the majority of laboratories, as well as schools, are inclined to retort core samples. Although the method is quite acceptable, there is a great need for improvement in preventing the loss of oil from the rock samples, between the time it is taken from the core-barrel up to the point where it is sealed in the retorts. There have been many correction charts and curves constructed to compensate for these losses, but as sand textures change the application of any curve was at best a guess. Loss of oil from a sand of good porosity and permeability is much greater than from a sand of poorer porosity and permeability. Variation of temperature, as well as constant handling and weighing the samples before retorting all cause oil losses.

In order to overcome this constant loss the writer has abandoned the customary method of collecting the samples at the well, which consisted in wrapping the samples in lead foil, or paraffining them and placing them in fruit jars, or sealed cans, and later to open them in the laboratory. The solution is to place the rock samples in the retorts at the well immediately after the core is taken from the hole; this way the samples are not handled until after the saturation test is completed. The problem then became the finding of some sort of a collecting receptacle which would also act as a retort, the retorts generally in use not being very convenient to carry in the field and properly preparing them for laboratory use. The receptacle is to be fairly low in cost, easy to transport and could be sealed tight without difficulty at the well.

After trying various types of containers, the writer's laboratory at this time uses a retort that fulfills all these requirements. It is constructed from a 2 by 6-inch bull-plug, a 2 by ¼-inch reducer, with a one-quarter inch plug tightly screwed into the reducer. The samples of cores are broken into chunks just as they are in the laboratory, but in this case right on the rig floor and placed into the bull-plug and the reducer screwed on tightly. This seals the samples and they may remain in these containers for any length of time; any loss from the rock will remain in the container.

When reaching the laboratory, the one-quarter inch plug is removed from the reducer and the bull-plug is screwed on directly to the retorting apparatus, the burners being placed under the bull-plug. The writer has used this method successfully for some time, and no allowances are made for evaporation or other similar losses. Other losses due to coking, etc., still remain; however, loss due to "hold-up" is minimized by making the total distance from the one-quarter inch end of the retort to the collecting tube as short and direct as possible. In this laboratory the total distance for the vapor to travel is 4 inches horizontally and 2 inches downward vertically.

The results indicate a much larger amount of water is shown by samples handled in this manner, due to the fact that water evaporates quite rapidly and most of it never reaches the laboratory retorts under the old method.

When the rock chunks are placed in the retorts at the well, a separate piece is saved for porosity and permeability determinations, and such samples may be just placed in a bag without the necessity of keeping them sealed. The volumetric determination of the rock samples used for saturation may be made after the oil and water is recovered. It is not necessary that such a determination be made before retorting, nor is it necessary that the same volume of rock be used for each determination.

Numbers placed on the retorts for identification may be painted on with white enamel. These numbers remain on the retorts even after subjected to the heat of the burners. A large sheet of asbestos is placed between the burner and the collecting tube as the short distance between the retort and the collecting tube requires this precaution.

*Practical Interpretation of Core-Analysis, L. S. Panyity, Transactions A.I.M.E. 1931.

William E. Humphrey, president of Tide Water Associated Oil Company, was honor guest at a surprise luncheon commemorating the thirtieth anniversary of his presidency of the Olympic Club of San Francisco, believed to be the oldest athletic organization in the United States. Present at the luncheon were the club's board of directors and a group of Mr. Humphrey's friends and associates.

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Wilshire Completes First Polymerization Unit on West Coast

By T. P. SANDERS

During the past few months Wilshire Oil Co.'s refinery at Norwalk, Calif., has again been the scene of construction activity. Completed only a year ago with many unusual features of modern refining included in its design, the plant has now been brought up to date by the addition of polymerization equipment. During its original construction this refinery attracted widespread attention because of its full-flashing two-coil selective Dubbs cracking unit with a daily capacity of 12,000 bbls. of crude oil; its Stratford acid-treating plant, which is the only one of its kind combining centrifuging and controlled temperature; and its cooling tower 790 feet in length.

With the addition of the polymerization equipment, operation of the cracking plant has been altered to increase the volume of gas available for polymerization. The daily output of the new unit will be 300 bbls. of 10-pound vapor pressure polymerized gasoline with an octane number of 82 and a blending value of 84 to 105, depending on the base stock with which it is blended. It will be blended at the Norwalk refinery and marketed as a motor fuel of 73 to 75 octane number.

Cracked gas for the polymerization plant is taken from the stabilizer reflux accumulator on the cracking unit at a pressure of 200 pounds and a temperature of 130 to 160° F. This gas contains hydrogen sulfide, which it was deemed advisable to remove before polymerization. A hydrogen-sulfide removal plant, licensed from Shell Development Co., was therefore erected in conjunction with the polymerization unit. This plant makes use of tri-potassium phosphate solution for removing hydrogen sulfide. The high thermal stability of the solution eliminates the possibility of poisoning the catalyst. Also, its noncorrosive nature makes use of steel equipment in the plant possible. The hydrogen sulfide content is reduced from between 1,000 and 2,000 grains per 100 cubic feet of gas to 30 grains per 100 cubic feet.

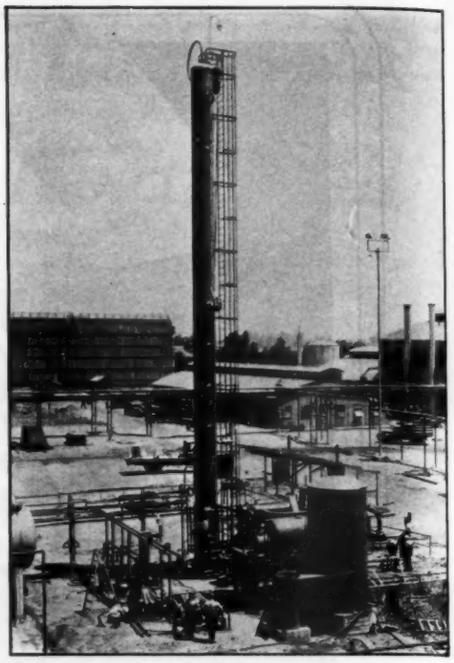
Gas passes from the hydrogen-sulfide removal plant through a heater and enters the polymerization plant under a pressure of 150 to 190 pounds and at a temperature of 300 to 325 degrees. This temperature is necessary to start reaction in the catalyst beds. After the reaction starts, there is a marked temperature increase due to the heat of reaction. This temperature pick-up varies with the olefin content of the gas, therefore the transfer temperature to which the gas should be heated before it enters the polymerization plant is a function of its analysis.

The catalyst used for polymerization is solid phosphoric-acid catalyst. In operation three chambers are employed in series through which the flow of gas is downward. The plant consists of five chambers, which allows for three in operation while one is being regenerated and the remaining chamber available as a standby. In order to prevent dehydration of the catalyst in these chambers it is necessary to add a small controlled quantity of water to the gas before it enters the plant.

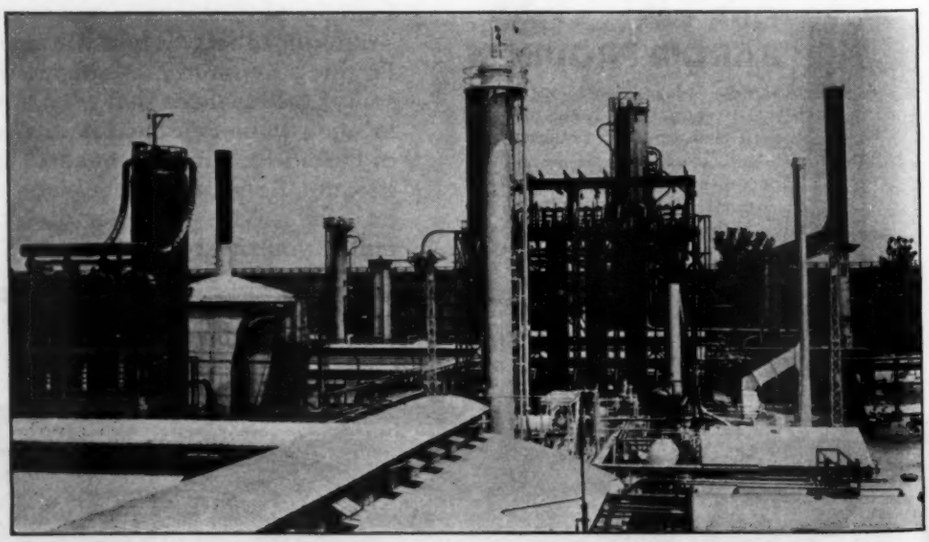
After leaving the reaction chambers, or catalyst towers, the products of reaction are condensed and pass to a receiver. Since they tend to carry phosphoric acid "fines" from the chambers, which set up a corrosive condition when in contact with water, it is necessary to inject a small portion of caustic into the stream leaving the chambers. Lean gas is separated from the polymer proper in the receiver. The rate of release of gas at this point is regulated to hold pressure on the entire system. The polymer product is then stabilized to a suitable vapor pressure. The stabilizer reflux accumulator is so arranged that the dry released gas can be recycled by injecting into the main process-gas stream. Recycling is employed to increase the olefin conversion and to allow control of the quality of the product.

With continued operation the solid phosphoric-acid catalyst gradually loses activity and requires regeneration. To accomplish this the carbonaceous material, which coats the catalyst and reduces its activity, is removed by burning with a controlled volume of oxygen in flue gas. The ignition temperature is approximately 600 degrees, and care must be taken that the maximum temperature does not exceed 950 degrees. The flue gas used must be cooled to remove the water of combustion then reheated. This prevents the catalyst from becoming too moist, which would cause serious corrosion. After regeneration, however, the catalyst must be steamed at a temperature of about 500 degrees for from 10 to 15 hours to replace the moisture removed in the regeneration procedure. Life of the catalyst between regenerations is estimated at 500 to 1,000 hours. When properly controlled, regeneration can restore the catalyst to its original activity.

In order to increase the volume of gas to the polymerization unit, the main fractionator of the cracking plant is now being refluxed with stabilized endpoint distillate instead of the unstabilized distillate previously used. This not only increases the amount of available gas to the polymerization unit but also effects more complete olefin removal from the dry fuel gas.



Hydrogen-sulfide removal plant at Wilshire Oil Co.'s refinery. The high column is a 40-tray absorber in which tripotassium phosphate is used to remove hydrogen sulfide

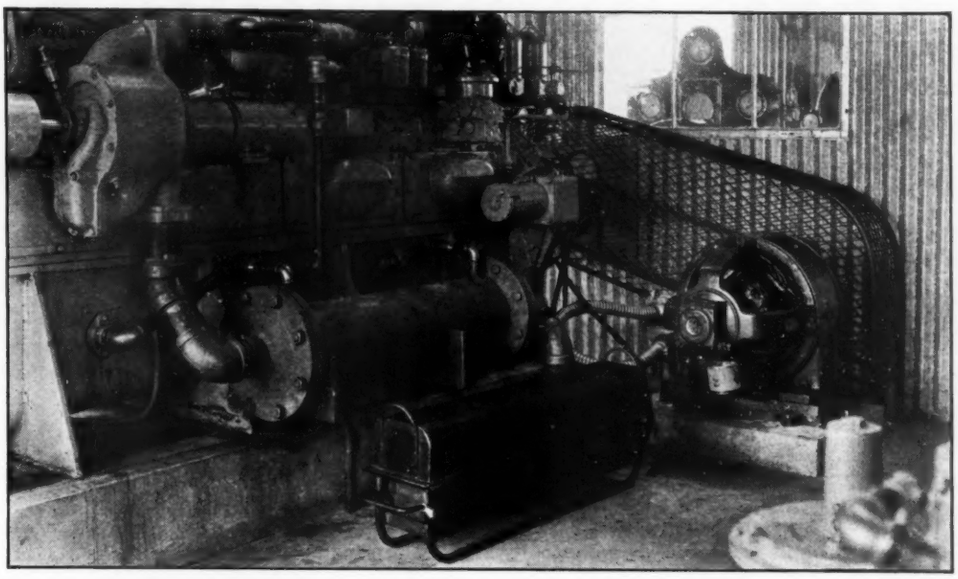


Polymerization unit in foreground and in background, the furnace and other parts of the 12,000-bbl. cracking plant with the 790-foot cooling tower

OPERATING IDEAS

Convenient Pipe-Line Markers

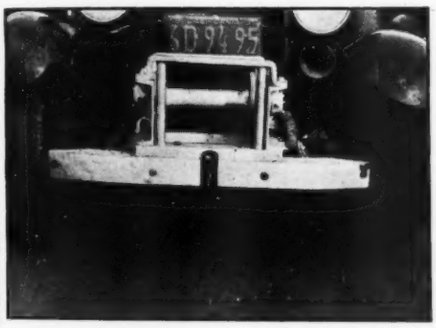
In desert country one gas company uses this type for pipe-line marker. Due to its permanent nature, visibility from great distance, and its concise information, it is a distinct help to line-walkers who are not familiar with the system. Also, since this company pays a reward to ranchers and others who call attention to line leaks, the signs are helpful in serving to identify the lines to nonemployes.



Lubricating Oil Cooled by Passing Through Exchanger

A major pipe line company operating in western Kansas has to its 400-hp. pipe line engines a lubricating oil cooler which allows the oil to be cooled by circulating through a tube section cooler. The cooling water flows outside of the tubes and serves to keep the temperature of the oil the same as that of the water. In the foreground is a portable battery case containing two 50-volt batteries. These are kept charged by the engine generator and are used for starting.

Winch Driven by Crankshaft



Trucks used in the oil fields often get stuck in mud, sand or snow. To facilitate getting the truck back into service at such times, one California gas company installed the winch shown in the above photograph. It is driven by a chain and sprocket drive from the front of the engine's crankshaft. A heavy rope or cable can be tied to a tree or to a pipe driven into the ground, and wound onto the winch to pull the truck from spots where the back wheels fail to get traction. The winch is also useful for handling pipe and other equipment used in laying and maintaining lines.

Gas Line Suspended at Creek Crossing

To lay a 4-inch high-pressure gas line across Buckeye Creek in Creek County a suspension bridge was made by welding pipe to form two towers at opposite sides of the creek. At the top of the high upright pipe was split and a short piece of 1-inch pipe welded across the opening at right angles to the run of the pipe. Over this 1-inch pipe a ¾-inch cable is threaded and anchored at each side of the creek. This cable is passed through a ring of larger diameter pipe placed over the 4-inch pipe near the center of the span. In this way the gas line is carried high enough to be well above high water when rains cause the creek to rise.

Gas Pressure Operates Pump

A producing company operating in the Billings pool of Oklahoma operates a small pump with gas pressure transferred from the well to the pump by a high-pressure rubber hose. The pump is used to move salt water and waste oil from a pit to a central point.

Average Sulfur Content of Texas Crudes Reduced

By W. L. NELSON

During the past 10 years the crude oils produced in Texas have approached more and more closely the properties of the average crude oil of the United States. The sulfur content has dropped from over 1 per cent in 1928 to about 0.4 per cent in 1936; the average oil is now nearly intermediate base, whereas in 1928 a large amount of naphthene oil was produced; and the gasoline content and gravity have increased during this same period.

Continuing the series of articles on the properties of crude oil produced in the various large fields in the United States, the author here discusses characteristics of crudes produced in Texas. Other articles of the series appeared in the July 29 and August 5 and 19 issues of The Oil and Gas Journal.

The thirty-two Texas fields of the past 10 years that were large enough to be included in the 99 largest fields of the United States are listed in Table 1. This table also gives characteristic properties of these oils. Average values of these properties during the past 10 years and the yearly production are shown in the accompanying charts.

A chronological tabulation of the advent of the most important fields is given below:

1927—The dominant fields were Archer County, Hutchinson County, Big Lake, Spindletop and Upton-Crane, each exceeding 9,000,000 bbls.

1928—Hendrick went to a peak of 58,000,000 bbls. and Pecos County was at 22,000,000 bbls.

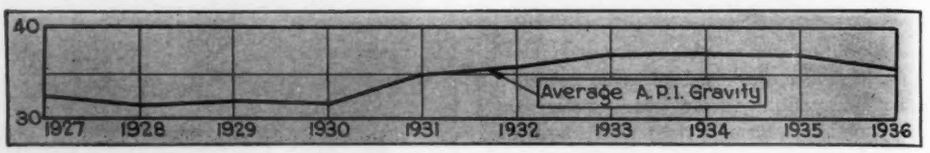


TABLE 1—MAJOR TEXAS FIELDS, 1927 TO 1936

Field—	Gravity A.P.I.	Sulfur (%)	Gasoline and naphtha (%)	Base	References
Joiner	39.4	.30	37.1	Inter.	(1)
Kilgore	40.0	.29	36.0	Inter.	(1)
Longview	38.4	.26	35.0	Inter.	(1)
Conroe	39.4	0.1	35.4	Inter.	(1)
Pecos County	30.6	1.53	22.9	Para.	(1)
Grand Falls	33.0	1.5	34.0	Inter.	(1)
Chalk-Settles	26.6	2.01	20.8	Inter.	(1)
Barbers Hill	33.8	0.15	24.7	Inter.	(1)
Sugarland	28.8	0.33	17.6	Naph.	(1)
Wilbarger County	35.4	0.66	30.0	Inter.	(8)
Humble	19.1	0.43	....	Naph.	(2)
Pierce Junction	29.5	0.18	40.0	Naph.	(2) (9)
Shackelford County	40.3	0.2	36.5	Inter.	(1)
Electra	38.8	0.35	35.8	Inter.	(2)
Archer County	39.8	0.28	38.9	Inter.	(1)
Loma Novia	24.5	0.13	9.5	Naph.	(3)
Hutchinson County	38.6	0.53	30.0	Para.	(1)
Big Lake	42.3	0.27	34.6	Inter.	(1) (9)
Hendrick	29.1	1.52	21.5	Naph.	(1)
Luling	27.7	0.92	13.1	Inter.	(1)
Hull	32.5	0.35	26.6	Naph.	(2)
Spindletop	29.0	0.17	14.6	Naph.	(10)
Powell	28.0	0.39	10.3	Inter.	(2)
Young County	38.4	0.26	36.4	Inter.	(2)
Van	34.8	0.86	26.6	Para.	(1)
Refugio	24.0	0.14	1.1	Naph.	(11)
Darst Creek	36.8	0.92	23.6	Inter.	(1)
Upton-Crane	25.0	....	15.0	Inter.	(9)
Saxet	25.5	....	9.0	Naph.	(9)
Greta	38.8	0.85	50.0	Inter	(3)

1929—Chalk-Settles reached a maximum of 14,000,000 bbls., Wilbarger County attained 10,000,000 bbls., and Hendrick produced 49,000,000 bbls.

1930—Pecos County reached peak of 42,000,000 bbls., Pampa 22,000,000 bbls., Refugio and Darst Creek each attained maximums of over 11,000,000 bbls.

1931—East Texas fields became important, producing nearly 100,000,000 bbls., and Big Lake attained a maximum production of 9,000,000 bbls.

1932—East Texas increased and the Van field attained a maximum of 17,000,000 bbls.

1933—Peak productions were: East Texas 203,000,000 bbls.; Conroe, 21,000,000 bbls.; Barbers Hill, 8,000,000; and several other fields were still producing over 10,000,000 bbls. each.

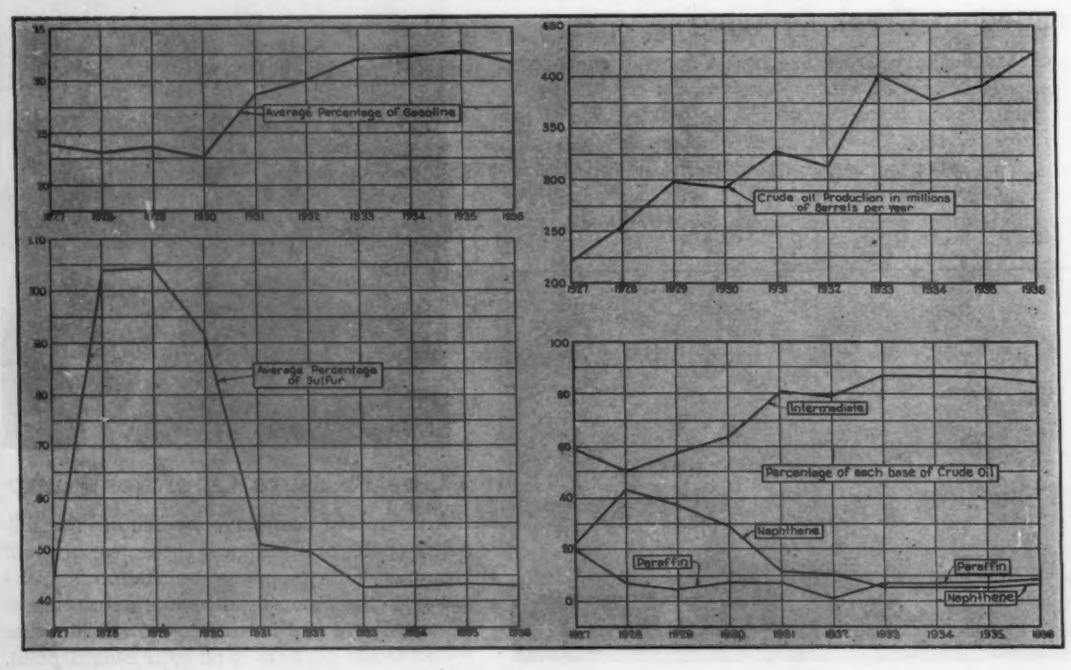
1934—East Texas still produced over 178,000,000 bbls.

1936—East Texas produced 165,000,000 bbls., and the following fields were growing: Grand Falls, Loma Novia, Saxet and Greta, at 5,000,000 bbls. each.

From 1927 to 1930 the largest fields were Pecos County, Hutchinson County, Hendrick, Spindletop and Upton-Crane, and the properties of these oils governed the properties of the average crude oil production of the state. From 1931 to 1936 the properties of the average crude oil production was dominated by the tremendous production from East Texas.

The sulfur content of Texas crude oils has been governed to a large extent by production from the Pecos County, Chalk-Settles, Wilbarger County and Hendrick fields. These all came to peak production during 1928, 1929 and 1930, and the production from the other high sulfur fields such as Luling (1927), Darst Creek (1930), Van (1932-33) and Greta (1937) has not been large enough to affect the sulfur content of the total production to any extent.

The only large paraffin base fields in Texas are Pecos and Hutchinson counties and the Van field.



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Fixed Ignition Lag Method of Testing Diesel Fuels

By J. S. CHANDLER
Pennsylvania State College

It has long been recognized that there is no dependable correlation between the ordinarily measured physical and chemical properties of a fuel and its performance in an engine. Two fuels of apparently identical physical and chemical properties will exhibit marked differences when compared as to the ease of starting a cold engine, the audible knock, or the smoothness of engine operations.

That property of a fuel which makes for easy starting, low audible knock, and relatively vibration-free running is known as ignition quality. High ignition quality fuel may or may not give

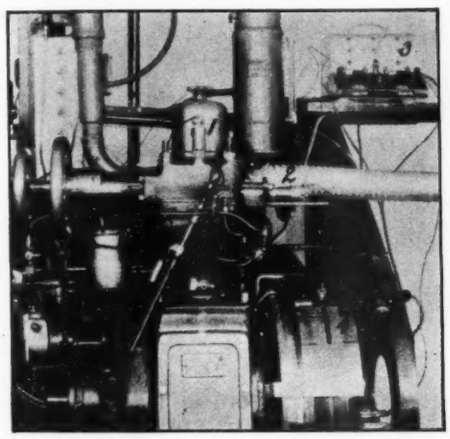


Fig. 1—The C.F.R. test engine showing: (1) Ignition pickup; (2) injection pickup; (3) double thyratron relay; (4) degree scale; (5) thermometer light; (6) injection knob control

lower specific fuel consumption depending largely upon the engine adjustments. Longer trouble-free engine performance can be expected with high ignition quality fuel.

It is readily seen, then, that the specification of the ignition quality of a fuel along with its other properties is of practical utility, both to the oil producer and user. The greater use of small high-speed diesels, which are more sensitive to ignition quality, only serve to intensify the utility. It only remains to find a convenient, accurate and representative method of determining this ignition quality.

Units of Ignition Quality

Since ignition quality cannot be measured directly in physical units such as mass or temperature but is manifest only in its effect upon an engine, there is need for a definite "yardstick" for its measurement.

The difficulty is overcome not by specifying a measurable effect upon the engine because this would vary greatly with engine design and operating conditions. Rather the specification is on the basis of the standard reference fuel which will produce the same engine effect as the fuel tested under identical conditions.

In this country the accepted primary reference fuels are made up of blends of high ignition quality cetane ($C_{16}H_{34}$) in low ignition quality alpha-methylnaphthalene ($C_{11}H_{10}$). The per cent of cetane (by volume) in the blend is the cetane number of the fuel and specifies its ignition quality.

For the sake of economy, secondary reference fuels are usually used for routine testing and calibrated at intervals against the primary standards. A commonly used secondary series is made by mixing a high cetane Shell fuel with commercial methylnaphthalene.

Methods of Determining Ignition Quality

1. *Ignition Quality Indexes.* In spite of the lack of correlation of the ordinary physical and chemical properties with ignition quality, numerous attempts have been made to combine two or more properties, such as specific gravity, viscosity, aniline point, 50 per cent distillation point, etc., in such a way as to form an index of ignition quality. Work along this line is still in progress but the results are only good for rough comparative purposes and are not expected to replace engine tests.

The indexes fail to properly take into account small quantities of added substances which may materially change the ignition quality. Thus doped fuels are not properly rated by this method. These fuels may be much used in the future.

2. *Bomb Tests.* Rating fuels by the use of bombs is largely a matter of historical interest. The earlier bombs gave results which were not representative. The delay period and process of burning was found to be much longer than in the actual engine. The latest improved bombs which provide for turbulence and otherwise simulate engine conditions give quite representative information. The correctly constructed bomb is so cumbersome and expensive that it is much more practical to use an actual engine to obtain the ratings.

***A.S.M.E.*—Presented at the National Oil and Gas Power Meeting, Pennsylvania State College, August 18 to 21, 1937**

Engine Tests

1. *Statement of Problem.* Having arrived at the decision to use the engine test method we are still faced with the problem of selecting a suitable test procedure and the development of adequate instrumentation to make the test convenient, accurate, and representative. This task has been the concern of the Volunteer Cooperative Fuel Research Group for some time. Considerable progress has been made and it is hoped that the final standardized procedure can soon be announced. A small single cylinder diesel engine similar to the gasoline knock rating engine is manufactured by the Waukesha Motor Co. This engine has been used very extensively for cetane rating and is known as the C.F.R. (Cooperative Fuel Research) engine.

2. *Critical Compression Ratio (C.C.R.) Method.* To return to our definition of ignition quality as that property which affects ease of starting, knock, and vibration, it would be logical to suppose that

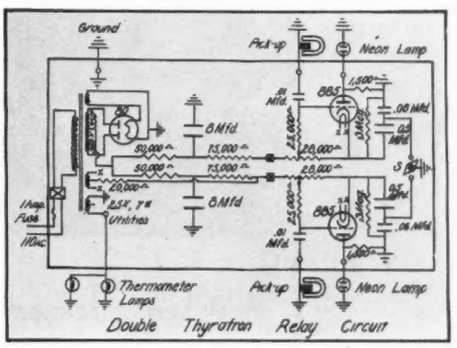


Fig. 2—Hook-up and constants used in the double thyratron relay circuit

engine tests would involve the measurement of one of these variables in some fashion.

Indeed, the C.C.R. method is based on the idea of measuring the starting characteristic of the fuel. The engine is motored at constant speed with air and jacket temperatures held constant. Fuel is injected for a certain number of cycles and then cut off. If the engine fires, the compression ratio is lowered; if it does not fire, the ratio is increased. In this way a critical compression ratio is found; the reference fuel having the same C.C.R. gives the rating of the fuel.

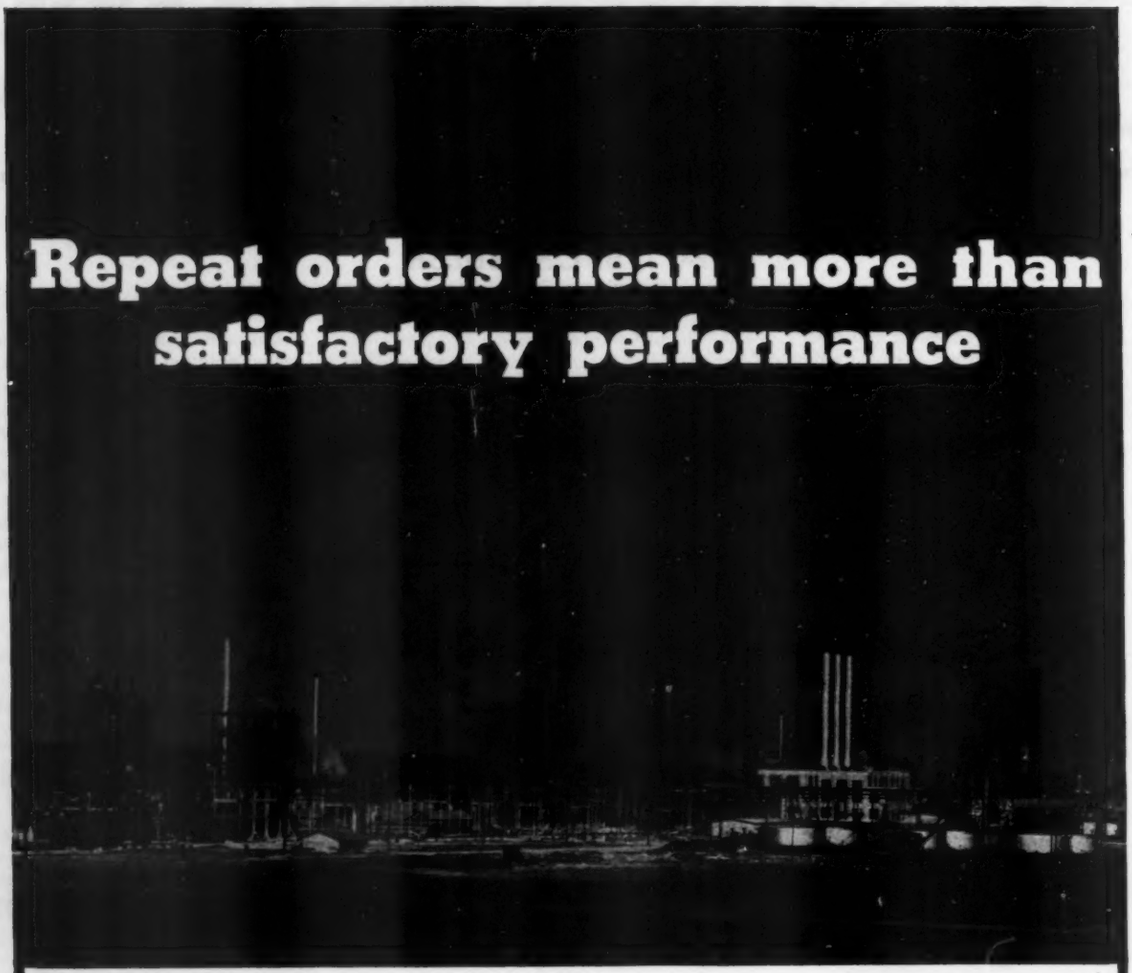
This method has the advantage of being very simple and requiring almost no instrumentation but unfortunately the accuracy is poor. Most painstaking care must be exercised in order to obtain a satisfactory degree of reproducibility. Furthermore, the ratings are representative only of starting conditions instead of running conditions. For these reasons the C.C.R. method has come into favor generally.

3. *Audible Knock and Vibration Criteria.* Some work has been done in rating fuels by these criteria but without very satisfactory results. The ear, of course, is unreliable for accurate determination. Noise meters and vibrographs are quite delicate

*Paper presented under author's title of "Penn State Method of Testing Diesel Fuels."

Note: Statements and opinions advanced in papers are to be understood as individual expressions of their authors, and not those of the society.

Repeat orders mean more than satisfactory performance



When a refiner orders additional cracking units several times from the same organization it proves beyond question that the design, construction and operating efficiency of the equipment was satisfactory in every way.

It does even more than that—it proves that the design was economically sound—that it helped the refiner to balance his output to meet marketing conditions—to get a larger volume of *profitable* business.

A large part of The M. W. Kellogg Company's business is re-order business from satisfied customers.

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and expensive instruments. The most important objection, however, is that both knock and roughness are very sensitive to engine design and operating conditions. For this reason accurate results are hard to obtain and once obtained are not indicative of performance in another engine.

4. *Maximum Rate of Pressure Rise (M.R.P.R.).* The rate of pressure rise in the cylinder is thought to be indicative of the rate of fuel burning and the M.R.P.R. is considered to be a measure of the shock loading which produces knock and engine roughness. This criterion bears some promise and the instrumentation is not overly complicated or delicate.

A diaphragm exposed to the cylinder pressure on one side and moving in the field of a magnetic pickup coil will generate a voltage proportional to the rate of the motion. It then only requires an

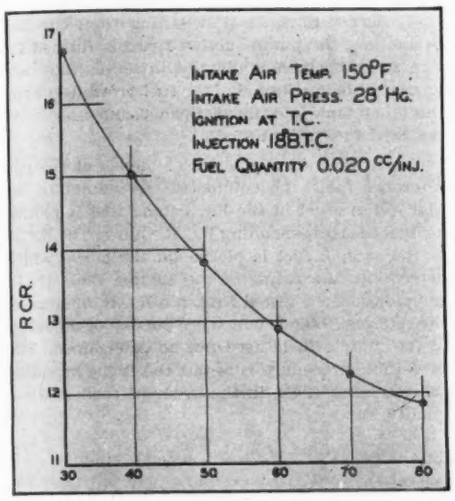


Fig. 3—Calibration curve of primary reference fuels

instrument to measure the peak voltage which is proportional to the M.R.P.R.

Available data seem to point to an unsuitably large dependence of M.R.P.R. on engine conditions which again discriminates against the accuracy of this method.

5. *Delay Method.* To understand this method we must first consider the generally accepted theory of combustion. This theody divides the process into three steps: (1) A delay period between the time the first portion of fuel leaves the nozzle and the point of "appreciable pressure rise" due to burning, (2) the rapid burning of the fuel which has accumulated during the delay period, and (3) the burning of the remainder of the fuel charge at substantially the same rate at which it is injected.

The first period is known as the ignition lag. The duration of this lag is dependent upon the ignition quality of the fuel. This is easily understandable since a short ignition lag fuel allows less fuel to accumulate during the delay period and reduces the shock produced by the rapid burning of this accumulaton. Likewise, it will be able to ignite in a cold engine where a long ignition lag fuel would fail to ignite. The delay criterion has the advantage of being relatively insensitive to operating conditions.

The words "appreciable pressure rise" are significant because some fuels exhibit a small pressure rise during the delay period and before rapid burning has set in.

The most thoroughly tried method of determining the ignition lag and of rating fuels on that basis is the bouncing pin delay method. By this method the flow of an electric current is started at the time of injection by a contactor on the fuel pump shaft and is discontinued by another contact actuated by a pin which "bounces" from a metal diaphragm located in the cylinder head. A suitable meter measures the amount of the current flow thus indicating the lag.

Although successfully used for fuel rating by a large number of laboratories, the bouncing pin must be carefully and tediously adjusted or the results will be erratic due to friction against the pin guides or other inherent difficulties. It is almost unanimously agreed that the bouncing pin delay method is to be discarded in favor of some of the better methods which have been devised.

6. *The Fixed Ignition Lag Method.* During 1935 T. B. Hetzel at Penn State made use of an all-electric method of determining the ignition lag.[1] The essential elements are: (1) Two electromagnetic pickup units, one mounted over the cylinder diaphragm in place of the bouncing pin and another actuated by the feeler pin of the injection nozzle, each producing a voltage proportional to the *rate* of the respective motions. Either pickup may be connected to (2) a relay consisting of a gas-filled grid-controlled electronic tube (thyratron). This tube in conjunction with a condenser causes a short impulse of current to flow when the pickup voltage reaches a predetermined value. This impulse of current is led to (3) a small neon light mounted on the flywheel. By reading the angle at which the flash occurs for both injection and ignition and taking the difference, the lag is determined in degrees.

This type of equipment has the advantage of being entirely free from any friction or inertia effects since there are no moving parts. The operation is simple and the equipment is rugged and reasonable in first cost. The injection timing is continually under observation and any wandering tendency or vagary in the injection system is immediately detected.

With the use of this apparatus, a method known as the Fixed Ignition Lag method has been developed.[2] Injection is adjusted by means of the timing device on the pump to 18 degrees before top center, then the point of ignition is made to occur at top center by adjusting the compression ratio. Thus a fixed lag of 18 degrees is used. The required compression ratio (R.C.R.) for each fuel is compared to that of the reference fuels and a rating thus obtained.

The convenience and accuracy has been greatly increased by recent improvements in instrumentation.

Improved Instrumentation

1. *Pickups.* After much experimentation it was decided to discard the original loud-speaker type of magnetic pickups. Due to the arrangements of masses and armature support, engine vibrations were unavoidably picked up and superimposed upon the desired impulses. In some cases careful adjustment with the aid of an oscillograph was required. The newer designs, shown on the engine in Figure 1,* are entirely free from engine vibration effects and are very much more compact than the original units. Adjustment is simple without the aid of an oscillograph.

2. *Double Thyratron Relay.* A very important development is the double thyratron relay circuit enabling neon flashes for both ignition and injection to be obtained during same engine cycle. Two neon lamps are used in conjunction with this relay. Figure 1 shows it on the engine. It measures 7 by 9 by 6 inches and weighs 7½ pounds.

For reasons of general acceptance and representative results a lag of 15 degrees is used instead of 18 degrees. The neon lamps are mounted 15 degrees apart on a carrier which rotates with the flywheel and supports two slip rings. The injection lamp arrives opposite a fixed pointer when the crank angle is 15 degrees before top center and the ignition lamp arrives at the same pointer at the top center position. One lamp is displaced axially about five-sixteenths inch from the other one. When the engine is running with an ignition lag of 15 degrees and firing at top center, the pointer and the two lamp flashes line up in the same straight line whereupon the required compression ratio may be read.

For special tests with different ignition lags and different injection timing a degree scale may be used in place of the pointer (Figure 1). The complete hookup and circuit constants are given in Figure 2.[3]

Miscellaneous Improvements

An intake surge tank of about 100 times the displacement volume of the cylinder was connected to the intake of the engine. This surge tank is provided with a rubber tube connection running to a closed-end manometer and with an inlet throttle having a conveniently located control.

The closed-end manometer is a converted barometer which gives absolute pressure readings in inches Hg. For normal routine testing the intake pressure is maintained at 28 inches Hg., thus

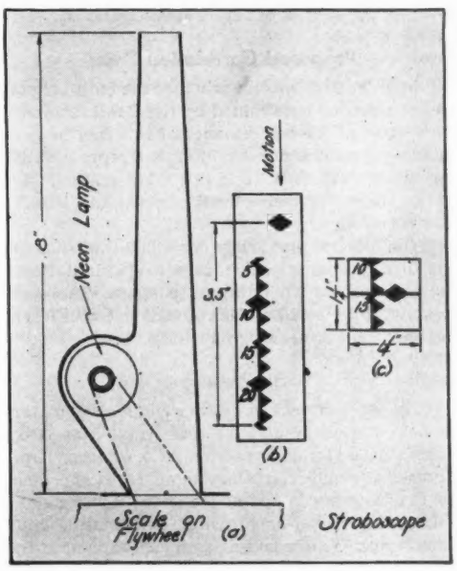


Fig. 4—Stroboscope constructed at Penn State

eliminating one troublesome variable as a possible source of error. The chamber is also connected to the air pressure line so that experiments with supercharging as well as throttling can be made. The intake throttle also acts as a convenient pressure regulator during supercharging.

In order to make the thermometers plainly readable in a semidark room, which is preferable for neon flash observations, small radio pilot lights in reflector shields were clamped to the thermometer housings. These lights are supplied from an extra 2.5-volt secondary winding of the power transformer of the thyratron circuit. One light can be seen on Figure 1.

By means of a light flexible shaft the adjustment of the injection timing lever is made from a knob conveniently located near the flywheel (see

[1] Bulletin No. 45, Engineering Experiment Station, The Pennsylvania State College, State College, Pa.

[2] "Cetane Rating of Diesel Fuels," by P. H. Schweitzer and T. B. Hetzel. S.A.E. Jl. 38 (1936), No. 5, p. 206.

*Author's Figure 2, showing the disassembled ignition and injection pickups; Figure 3, showing close-up view of the double thyratron relay; and Figure 7, showing the stroboscope mounted on the C.F.R. engine are omitted.

[3] The American Instrument Co., Silver Springs, Md., now has on sale an instrument employing a circuit similar to the above. The pickups, neon lights with supporting protractor, slip rings, brushes, etc., are supplied with the instrument.

Figure 1). This greatly facilitates the ease of adjustment.

Since the C.F.R. engine does not have a fuel filter, it is advisable to filter all fuels before testing. In order to facilitate this a filtering apparatus was constructed which makes use of compressed air to force the fuel through a chamois skin.

Test Procedure

For the sake of reference, the operating conditions and procedure as given by Hetzel but revised in accord with best present-day practice are given in the appendix.

1. *Curvilinear Bracketing.* The author wishes to emphasize the value of curvilinear bracketing of test fuels by the reference fuels. In our tests, intervals of five numbers of Shell secondary reference fuels were used. This brackets each fuel within an interval of 3.7 cetane numbers. A curve of reference fuels against their R.C.R. is plotted and the test fuel ratings read from this curve. Figure 3 shows a typical curve.

By this arrangement and due to the fact that successive readings are taken quickly, the effect of any uncontrollable variable which otherwise might introduce discrepancies is reduced to a minimum.

The crucial test of the accuracy of any method is the reproducibility of its results. The Penn State method has met this test. Besides accuracy and convenience, a test method must be representative if it is to be useful. All indications are that the delay method is representative. This point, however, is the subject of future investigations.

Proposed Correlation Tests

In order to determine whether the ignition quality of a fuel as determined by the C.F.R. engine is indicative of the performance of this fuel in some other engine, it is proposed to rate a representative group of fuels by the ignition lag method in a large variety of commercial engines and observe the correlation.

The pickups previously described can be adapted to any engine which uses a standard Bosch nozzle and has an indicator passage. The same relay will be used but for convenience a different arrangement of neon lights will be used.

Stroboscope

The same effect can be obtained if a neon lamp is held stationary and the scale rotated as is obtained by a stationary scale and a rotating lamp. Indeed, a single stationary lamp takes the place of two rotating lamps and has the advantage of eliminating brushes, slip rings, and rotating lamp mountings. Also, a larger lamp can be used in the rugged stationary mount. This in reality is a true stroboscope.

Figure 4 (a) is a side view sketch of such a stroboscope constructed at Penn State. The lamp is an ordinary 110-volt, 1-watt neon lamp without the base resistor. Both of the neon connections of the relay are connected to the same lamp. A larger condenser discharge is needed for this lamp than for the small rotating lamps. This is easily arranged for by turning the switch S of Figure 2 to the vertical position by means of a screwdriver.

Figure 4 (b) shows a scale suitable for reading the ignition lag with ignition at top center (or some other fixed point). The scale should preferably consist of white markings on a dull black background and be glued to the rim of the flywheel or any available rotating member. The dimensions are for a 16-inch wheel rim.

Figure 4 (c) represents what the eye sees when looking into the stroboscope while the engine is operating with a 14.4-degree ignition lag.

Trials have proven that the stroboscope works very satisfactorily.

Since commercial engines do not have adjustable compression ratios and some do not have variable injection timing, a new test procedure will have to be worked out which will differ somewhat from the fixed ignition lag procedure.

Conclusions

The Penn State method of testing fuels has proven itself to be very convenient and accurate. All indications are that it is equal or superior to any other devised method in regard to the results being representive.

Appendix

Recommended Test Procedure for Diesel Fuel Testing—Operating conditions and procedure for rating diesel fuels by the Fixed Ignition Lag Method in the C.F.R. diesel fuel testing engine are as follows:

OPERATING CONDITIONS

1. Engine speed	900 ± 30 r.p.m.
2. Jacket temperature	Boiling point of water constant within ± 1° F.
3. Nozzle pocket water exit temp.	100 ± 1° F.
4. Inlet air temperature	150 ± 0.5° F.
5. Inlet air pressure	28 ± 0.01" Hg.
6. Lubricating oil temp.	150 ± 10° F.
7. Injection advance	15 deg. B.T.C.
8. Ignition	At T.C. exactly
9. Nozzle opening pressure	1,300 ± 100 lb./sq. in.*
10. Fuel quantity	0.030 cc./injection ± 10%
11. Rheostat settings	To give earliest indication

*For Bosch nozzle DN30S3 and a 1/16-in. by 25-in. tube.

Procedure

1. The engine is motored approximately five minutes while the air and water heaters warm up.

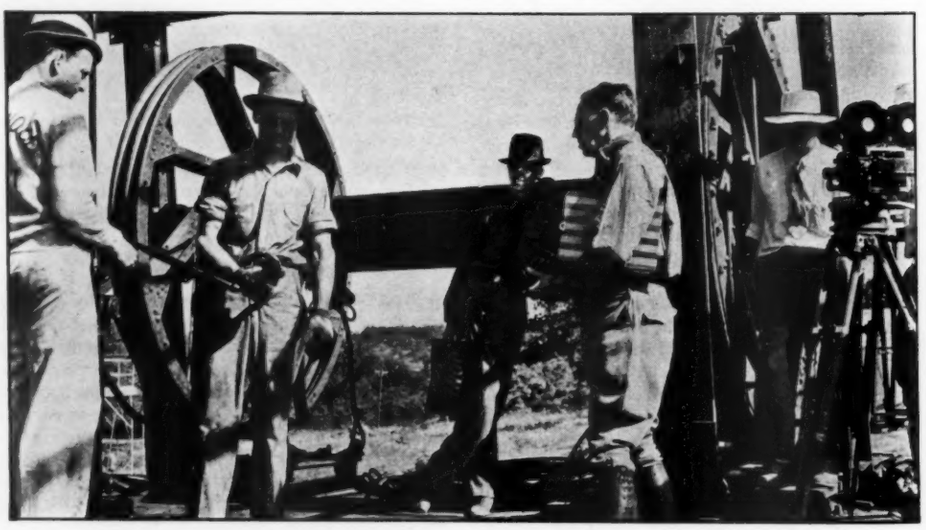
2. The by-pass valve in the nozzle is then closed, the injection timing adjusted and the compression ratio set to give reasonably smooth running while the engine warms up. The engine should run under power for at least 20 minutes in order to attain equilibrium temperature conditions of the engine and of the crankcase oil.

3. The injection timing and the compression ratio are adjusted to make the flashes line up opposite the pointer. The scale reading of the compression ratio is increased until ignition takes place several degrees before T.C. and again decreased until ignition is indicated at T.C. This is repeated so that altogether two determinations are made with increasing and two with decreasing compression ratios. The average of the four readings is then used to determine the required compression ratio for that fuel. The R.C.R. is calculated by the formula R.C.R. = 1 + 18/H, where H is the average of the four micrometer readings of the adjustable plug.

4. Every time when switching from one fuel to another, the pump suction space is flushed for five seconds, then while the injection tube and nozzle are being purged of the fuel previously used, the other tank is drained, flushed and filled with the next fuel to be tested.

5. After testing a series of blends of the two reference fuels, the volumetric percentage of the high cetane fuel in the low cetane fuel is plotted against the corresponding R.C.R. values. The R.C.R. of the sample fuel is placed on the curve which determines the rating of the sample fuel. If the sample fuels are tested first, the R.C.R. of some of the reference blends which are outside of the range of the sample fuels need not be determined. The preferable procedure is to test the fuels, including the reference fuels, in the order of their ignition quality.

TALKING PICTURE ILLUSTRATES PROPER CARE OF SUCKER-RODS



Movie crew on location shooting scenes for "Progress in Sucker-Rods"

Hollywood went to the oil country when the S. M. Jones Co. had an expert movie crew, with director and everything, in the oil fields and in their factory at Toledo shooting their new talking picture, "Progress in Sucker-Rods."

Many new improvements and developments in sucker-rods have kept this industry in the forefront in the oil country. The company, with the cooperation of a number of producers, has just completed an interesting talking picture which covers the most important high-lights of the progress that has been made in sucker-rods, field engineering work, and metallurgical advancements.

Although this talking picture contains a great deal of interest to all production men, clutch men and rod crews will particularly enjoy the interesting right and wrong way to handle sucker-rods which is portrayed through the creation of a comedy character, Rodney. Rodney, a hitchhiker on his way to Hollywood to crash the movies, shows the rod crews what not to do to sucker-rods.

Bookings for this talking picture are heavy and early reservations for groups should be made through the S. M. Jones Co., Tulsa office. The complete film and the latest portable motion picture sound projector is available without cost.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Thurston Friction Machine for Testing Lubricating Oils

Would appreciate receiving a description, with references if possible, of the Thurston friction machine used by railroads for testing the durability of lubricating oils.—R. W. H.

The Thurston friction machine is probably the oldest machine of this sort that is in use today, described in the literature of 40 years ago, the apparatus has been modified, notably by Henderson-Westhoven. It consists of a shaft revolving between bearings, the pressure on one of which may be regulated by adjusting a coiled spring. The degree of pressure produced by the spring on the bearing is indicated by a pointer. A thermometer indicates the frictional heat generated. A cone pully drives the machine.

The oil to be tested is introduced into the bearing, which has the same dimension as the usual car journal. The friction developed by the rotating journal and the bearing causes a displacement of a pendulum and the arc scale is so graduated that a reading of the angle gives the coefficient of friction.

The description following is from Thomsen: "The machine consists of a shaft supported by two bearings; the shaft at one end has an overhanging bearing fitted with two brasses, on which the oil is tested. Suspended from the bearing is a hollow pendulum containing a spring, by means of which a certain bearing pressure may be maintained. When the shaft revolves the oil film interposed between the shaft and the brasses causes the pendulum to swing outward and it remains in a certain position according to the oil in use.

"The less the out-swing, the less is the coefficient of friction, and the better the oil, for this particular bearing and for the particular conditions prevailing."

References: Stillman, Engineering Chemistry. Battle, Lubricating Engineer's Handbook. Thomsen, Practice of Lubrication.

New Method for Rating Antiknock Value of Gasoline

A new method for rating the antiknock value of gasoline containing lead is reported to soon go into effect. Will you give me an outline of the new method and the date it will be required?—F. C. E.

The method, designated L-3, for determining the octane rating of motor fuel is the outcome of an investigation of the rating of gasolines by the Motor Method and the results observed under road conditions. The new method is claimed to give better correlation between the two and the results of a test appear to be equally as reliable as those by the former methods. The octane numbers obtained by the L-3 method are 2 to 2.5 units higher.

It has been found that a large percentage of gasolines which have been graded as 70 octane fuels, test 72 to 72.5 by the L-3 method.

The essential changes in the conditions of the new test include: Lowering of the mixture temperature from 300° to 260° F. Spark advance is automatically varied with the compression, being set at 16° for a 5 to 1 compression ratio. The knock intensity is kept constant, the same as obtained from 65 octane number fuel made by blending A-5 and C-10 reference fuels at 5.5 to 1 compression ratio and 760 mm. pressure.

L-3 method is to be required under contracts for Q Gasolines on September 1. The maximum is to be 72 octane number. The Ethyl Gasolines, a minimum of 78 octane number required, are to be examined by this method on and after October 1.

Stoddard Solvent Specifications to Include 50 Per Cent Requirement

Your reference in The Oil and Gas Journal, February 11, 1937, to the National Bureau of Standards specifications for Stoddard Solvent mentions elimination of the 50 per cent distillation item. I am told that this has been reinserted. Will you give me the details?—L. E. D.

Under date of June 11, 1937, the Division of Trade Standards of the National Bureau of Standards, Washington, D. C., announced:

The National Association Institute of Dyeing and Cleaning, Inc., with the approval of the standing committee, has requested a change in the Recommended Revision of Stoddard Solvent, Commercial Standard CS3-28, circulated to the industry for acceptance on January 12, 1937, to insert a 50 per cent distillation requirement in paragraph 11a of the recommended revision, TS-2330. That paragraph will then read as follows:

"Distillation range—When a sample is distilled in accordance with paragraph 20, not less than 50 per cent shall be recovered in the receiver when the thermometer reads 350° F. and not less than 90 per cent when the thermometer reads 375° F. The endpoint (maximum distillation temperature) shall be not higher than 410° F."

This 50 per cent point requirement was a part of the original Commercial Standard CS3-28.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Monobenzyl-para-Aminophenol

Use—Antioxidant for retarding gum formation in gasoline.

Form—Light brown powder.

LIMITATIONS

Melting point, min. °F.	185
Purity, min., per cent	98
Gasoline, insoluble max., per cent	2
Solubility (approximate per cent) at 77°F.—	
Anhydrous methanol	60
Ethyl alcohol (95 per cent)	65
Water	0.06
Gasoline	0.1 to 0.5

Production and Use of Natural Gas in the Texas Panhandle

The Railroad Commission of Texas states that our data from the report to the Seventy-third U. S. Congress would be more accurate if we were to quote from the June, 1937, report of the commission.—Editor.

On page 4 of this report District No. 10, the Panhandle district, the tabulation indicates there are as of June, 1937, 1,374 gas wells producing a total of 1,317,379,000 feet of gas a day, which is equivalent to 5.94 per cent of the daily open flow potential of the wells. The production is divided into 729,102,000 feet of sweet gas and 588,277,000 feet of sour gas a day. The following uses are made of the gas:

USE MADE OF PANHANDLE GAS

	Per cent
Light and fuel	44.14
Gas-lift and repressure	00.44
Gasoline plants and resale	55.42

There is no dry gas being blown to the air. However, there is a volume of 54,367,000 feet of residue gas going to the air, as compared to 385,715,000 feet of gas produced incident to the production of oil, which would be legally wasted to the air if it were not that the commission requires use of this type of gas whenever possible.

The commission report for July, 1936, contains the following additional information:

"The total field potential increased from 18,606,868,000 feet daily to 20,194,857,000 feet during the period July, 1935, to July, 1936.

"Despite the tremendous quantities of gas which have been taken from the Panhandle reservoir—estimated to be above 6,000,000,000,000 feet—practically 50 per cent of the total acreage still retains in excess of 400 pounds pressure per square inch, or virtually initial pressure, as is shown in the graph following Table 1.

"The weighted average pressure for the entire field fell from 362.51 pounds per square inch in July, 1935, to 354.93 in January, 1936. As was characteristic of the component areas during the first six months of 1936, the pressure drop was arrested as production approached uniformity under regulation, and the field registered a net gain of .07 pound in pressure for the test interval, the computed pressure for the field being 355 pounds per square inch, July, 1936."

References: Railroad Commission of Texas, Natural Gas, Natural Gasoline, and Carbon Black in the State of Texas, June, 1937; same—semiannual report on the Panhandle Oil and Gas Field, July, 1936.

Hypsometer for Determining Boiling Points

I have a reference to a hypsometer used for determining boiling points. Will you favor me with a description of this instrument?—D. E. O.

The hypsometer is a metal still, usually of copper, of the flask type which has a jacketed neck so that the vapors are held at the temperature of steam. It is used in laboratories for distillations and determining boiling points. The apparatus was first so named from the Greek word meaning height, because it was used for finding the heights of mountains from the boiling points of water.

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Date of Discovery and Peak of Production

Can you give me the date of discovery, date of peak of production and volume of oil produced at peak for the following oil fields—Burbank, Tonkawa, Seminole, Oklahoma City, and East Texas?—J. D. R.

The following table gives the information you desire.

Field—	Date of discovery	Date of production peak	Peak production in bbls. per day
Burbank, Okla. . .	May, 1920	July, 1923	121,760
Tonkawa, Okla. . .	July 29, 1921	Sept., 1924	108,500
Seminole, Okla. . .	July 16, 1926	July, 1927	527,000
Okla. City, Okla. . .	Dec. 4, 1928	Aug., 1933	267,400
East Texas, Tex. . .	Sept. 8, 1930	Apr., 1933	760,240

Aerial Survey Notes

In further answer to the question by W. N. answered in the August 5 issue of The Oil and Gas Journal the following information is given. The original question was: "Can you tell me what geophysical system is used in U.S.S.R.? I understand one based upon the theory that the flora above lands where there is oil is different from the vegetation on land that does not overlie gas or oil, is being used. What is the system called and is it dependable?"

In a recently issued report of the A.I.M.E. Aviation Committee for year 1936-37 the following methods of observation and interpretation of ground conditions observed while flying are suggested.

Soil patterns are useful in locating salt domes. Evidence of incipient parching points to horizontal stratification.

Difference in timber growth. Distinction in tree growth usually reveals very clearly the main features of geological structure.

Stratification and faulting, in arid ground, appear with the sharpness of detail of a textbook diagram.

Difference in resistance to weathering often indicates sediments and volcanic rocks.

Granite outcrops are easily recognized and "fingers," when found, sometimes point to main breaks of ore-bearing lodes.

Tree patterns in some places take the form of ovals, lemniscates or lozengers, indicating approximate horizontality of stratification, in an area of low relief.

Shadow effects. In an area of moderate relief, the strike of the rocks appears although concealed in underbrush. By using the directions of the shadows of trees and other objects in the print, it is possible to determine the orientation of the picture independently of compass bearing, if the exact moment of exposure and the latitude and longitude are approximately known.

Contour lines prepared with the aid of stereopticon camera equipment are the most important modern developments of aerial geology.

Transverse structures. Volcanic dikes are easily traced across main ridges of a mountain complex.

Anticlines and the synclines are usually conspicuous.

Change in physiography produced, for instance, by transition from pre-Cambrian schists to the granites is striking, the latter areas being much less rugged in character.

Contact lines. Aerial maps made after the failure of the St. Francis Dam, California, clearly show the contact line running through the dam site.

In situ. At a California gold dredging operation, aerial photographs revealed the area to be a decomposed rock mass carrying a mass of quartz stringers.

Tree types. A certain type of tree or other vegetation has been found to be indigenous to regions of good copper prospects. Aerial maps have revealed this vegetation, thereby directing exploration parties to regions which justify investigation.

Oil seepages are revealed by their effect on the foilage. The axis of the anticline was clearly revealed by the strike of the beds along the streams.

Faults were revealed through areas such as orchard land by difference in soil coloration depicted in aerial maps on opposite sides of the fault.

No rock outcrops. Where profound weathering has caused complete decomposition of the rock formation, leaving deep soils in situ to mark the former distribution of rock types, photographed from the air, they stand out with all the sharpness and clarity of a color map.

Measurements of dips. This is capable of being done from the air in country difficult of access, and is valuable in determining closure in oil prospecting. The method is to fly in circles around the outcrop, rolling down one wing until the surface appears to coincide or parallel the formation. The bank of the plane, as indicated in degrees upon the Sperry gyro horizon, will then be the dip of the outcrop.

Swirls. Certain overlapping folded structures have been identified as collecting grounds for petroleum, and are readily noticeable from the air, taking the form of gigantic ellipses.

Hot springs may be noted from the air in arid country and are held to indicate the existence of fault lines.

Locating Gas and Oil in Place

Can you inform me whether there is any geophysical method or system that actually finds oil or gas directly, not through the usual roundabout way of systems generally used to locate structure?—G. W. B.

In reply to your inquiry the answer is "No." The use of geology and geophysics only indicates structure which may trap gas and oil but it remains for the drill to actually prove either of these hydrocarbons is there in commercial quantity.

A number of men have made claims they can locate gas and oil in advance of drilling and to prove their contentions will produce a list of results of their so-called "predictions." Close analysis of such claims will usually show the men making them have failed to report all the facts and have been led more by desire than cold logic to set down their records.

Under the Soviet government many new theories of geology have been tried out in U.S.S.R. and what is known as gas surveying is a new method of geological prospecting. It is based upon the determination of the traces of oil gases and vapors in mantle rocks.

By selecting samples of subsoil at a depth sufficiently below the vegetable cover and plant remains this gas survey is made. It is stated the gas detected in the soil samples must therefore be accounted for by the presence of gas-producing sources as, for instance, the deposits of natural gas, oil, coal and oil shales.

It is further claimed that experimental work has shown that gas surveying may be successfully applied in practice as a prospecting method. Gas survey may be also applied as an exploration method with a view of contouring out gas and oil deposits sought for. Under the complicated conditions of oil and gas occurrence it is, however, extremely difficult to decipher the curves and isolines in question. To solve such problems further theoretical and experimental research work is to be carried out.

This is the most advanced method now available to the industry to locate gas or oil in advance of drilling and it will be noted it is far from perfected and further even if the presence of hydrocarbon gas in the subsoil is determined, it still does not prove that there is gas or oil in the underground formations.

Data on Drilling Costs

I find I frequently have need for fairly accurate estimates on well costs of various depths, and would like to know what text-book, articles, tables or other sources of such information are available.—J. W. M.

There are numerous sources of information which can be used in making estimates of drilling costs for wells of various depths and located in different parts of the country. However, no bibliography has been made of these data but the following references are given to three books in which will be found some of the information you desire.

On page 189 of Uren's "Oil Field Development" will be found cost of drilling four wells in the Coalinga field, California, with standard tools in 1913. In the same book on pages 268 and 269 are detailed costs of drilling rotary holes in Elk Hills field, California, and Midway field, California.

Chapter 20 in Jeffery's "Deep Well Drilling" covers cost of drilling wells in various localities. These tables cover both cable tool and rotary outfits and give examples of costs in various fields in this country from Bradford, Pa., to California.

In "Petroleum Próduction" by W. F. Cloud, University of Oklahoma, Norman, Okla., there are considerable data on drilling but no actual tables of costs. There are good bibliographies on the various subjects covered in this book and it is possible that some of these references would be of interest.

The main trouble with most of these references is their age. None are of really recent date. It is therefore necessary to make new estimates if close figures are desired. Any of the above mentioned books can be secured through the Book Department of The Oil and Gas Journal.

Decimal Point in Wrong Place

I am wondering whether the party who wanted to know how many gallons of water there are in a cubic yard noted the fact the decimal point in the answer given is one place to the left. The proper answer is 201.9735 gallons or 10 times the quantity given. I call this to your attention just for the sake of accuracy.—A. H. W.

"YESSIR! THEY ALWAYS SEEM TO KNOW IN ADVANCE EXACTLY WHAT A DRESSER-COUPLED LINE WILL COST"

24" O.D. Style 38 Steel Coupling

No pipe-line operator or builder likes to have a lot of "extras" creep in—costs and delays that weren't expected. And to take such risks is needless! By the specification of simple, *standardized* joints—Dresser Couplings,—your joint-making costs can be figured in advance, right down to the last penny. For instance:

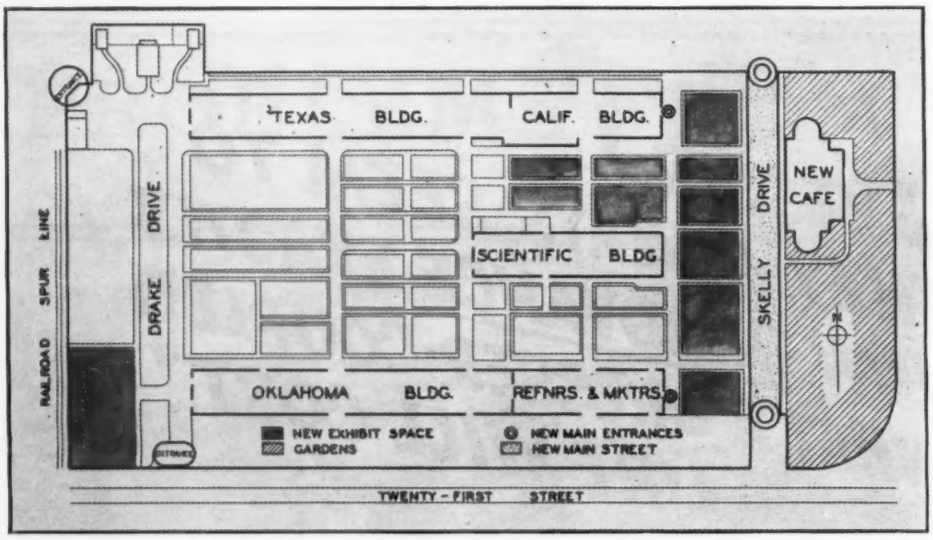
Material Costs—No variables! Parts for every Dresser joint are the same, being "factory-made." **Labor Costs**—Can always be safely estimated on the basis of two man-minutes per bolt. **Construction Delays**—None, because of the clock-like precision with which a Dresser-coupled line goes together.

S. R. DRESSER MFG. COMPANY, BRADFORD, PA.

In Canada: Dresser Mfg. Company, Ltd., 60 Front Street, West, Toronto, Ontario

NOTE TO READER: This is the fourteenth in a series of advertisements dramatizing one engineer's experience with his first Dresser-coupled line. For the complete story, write for Bulletin 351.

1938 EXPOSITION EXHIBITORS TO USE INCREASED SPACE



New plat of the International Petroleum Exposition grounds for the May 14 to 21, 1938, exposition at Tulsa

Forty-two per cent of the exhibitors at the 1936 International Petroleum Exposition want increased space for the 1938 exposition to be held in Tulsa, May 14 to 21, according to the first reports received in answer to a letter sent to former exhibitors.

The exposition management has set September 15 as the deadline of the option granted exhibitors at the 1936 show and Manager Way reports reservations coming in at a fast rate.

"There is already a sellout of the space bordering Drake Drive," he said, "with Continental Supply, Oil Well Supply, Frick-Reid Supply, National Supply, Parkersburg Rig & Reel, International Derrick & Equipment, and Bridgeport Machine Co. having taken their old space. Most of these firms have their own permanent buildings on the exposition grounds. The exposition has reservations from approximately three-fourths of those exhibiting in 1936. Numerous requests have also been received from firms who have never exhibited. Allocation of space and contract will be mailed out after the September 15 deadline.

"A trend toward more and larger outside exhibits is noted with a number of the exhibitors who have had six or more inside building booths planning to move out-of-doors for 1938. There is greater economy and freedom for the large exhibitors on the outside space."

To take care of the increase in space requested for the 1938 show, the exposition board has approved the creation of 40 per cent more outside exhibit ground by moving the east fence back 150 feet.

Manager Way reports several large exhibitors are considering construction of permanent buildings on the new exhibit space bordering the new street facing the east end of the California, Scientific and Marketers and Refiners buildings.

With a new modernistic air-cooled cafeteria also facing the new street and the increased exhibits expected, the east end of the grounds will be a beehive of activity for the 1938 show, he said.

Tentative Oil and Gas Program at Illinois Mineral Conference

M. M. Leighton, chief of the Illinois State Geological Survey, has announced the preliminary program of the fifth annual Illinois Mineral Industries Conference to be held at Urbana on Friday and Saturday, October 8 and 9, under the joint sponsorship of the Geological Survey, the Engineering Experiment Station of the University of Illinois, and the Illinois Mineral Industries Committee.

Clyde E. Williams, director of the Battelle Memorial Institute of Columbus, Ohio, will give the main address at the opening session on Friday forenoon, on "Research in the Mineral Industries," adhering to the theme of the conference itself, which will stress recent scientific and industrial developments of special significance to the mineral industries of Illinois.

The oil and gas program following is tentative.

Friday, October 8, 2 p.m. Chairman, T. B. Steele, manager, Kewanee Oil & Gas Co., secretary-treasurer, Illinois-Indiana Petroleum Association, Robinson.

"State Regulation of Oil and Gas Production for the Prevention of Physical Waste," by William Bell, Bell Brothers, Robinson, president, Illinois-Indiana Petroleum Association, and representative of Gov. Henry Horner in the Interstate Oil Compact Commission.

"Changing Legal Concepts Affecting the Oil and Gas Industry," by Walter L. Summers, professor of law, University of Illinois.

"Economic Aspects of the Fuel Oil Industry," by Walter H. Voskuil, mineral economist, Illinois State Geological Survey.

Saturday, October 9, 9 a.m.:

"Developments in Illinois Since January 1, 1937," by A. H. Bell, geologist and head of the Oil and Gas Division, Illinois State Geological Survey.

"Oil Exploration in the Illinois Basin," by Theron Wasson, chief geologist, Pure Oil Co., Chicago.

Water-flooding. (Speaker to be announced.)

"Recent Developments in Water-Flooding in Illinois Oil Fields," by Frederick Squires, associate petroleum engineer, Illinois State Geological Survey.

Plan Transportation Meeting at the Houston Oil Show

In order to call together all heads of transportation departments of various oil companies, a two-day meeting has been scheduled by the transportation department of the oil and gas industry of Texas during the Oil-World Exposition in Houston, October 11 to 16, inclusive. This meeting will be devoted mainly to discussions of fleet operating problems and will take place on October 13 and 14.

Arrangements for this meeting were made on August 4 and the following committee was appointed: T. G. Price, Shell Petroleum Corp., Houston, chairman; Leo New, United Gas System, Houston, vice chairman; Oscar Lynch, Humble Oil & Refining Co.; E. B. Tilley, Gulf Oil Corp.; and Jack Parker, Transportation Equipment Co. Other committee men appointed were Tom Bradfield, Texas Co.; Roy Fike, Mid-Continent Petroleum Corp.; J. E. Johnson, Tide Water Oil Co.; Alex Muncie, Pure Oil Co.; Lonnie Smith, Sun Oil Co.; Dan Moran, Continental Oil Co.; S. C. Bovell, Magnolia Petroleum Co., and Sam Phillips, Sinclair-Prairie Oil Co.

Petroleum Earnings Increase but Investment Yield Low

Although net earnings of the petroleum industry in 1936 showed a gain over 1935, the return on invested capital stood at only 2.54 per cent, according to the American Petroleum Institute.

Earnings for the industry as a whole have not exceeded 5 per cent in any year since 1921, and for three out of the past six years the industry accumulated deficits. For the 16 years from 1921 to 1936 average annual earnings were only 1.43 per cent on the invested capital. Although the industry has steadily expanded, increased competition, low prices, rapid obsolescence of equipment, and mounting taxes have tended to keep earnings at a low level, as is evidenced in the following table:

PERCENTAGE RETURN ON THE INVESTMENT IN THE PETROLEUM INDUSTRY

Year—	Investment	Net earnings	Return (per cent)
1921	$6,550,000,000	$—1,841,457	—0 03
1922	7,877,375,000	221,615,211	2 81
1923	8,000,000,000	75,355,904	0 95
1924	9,150,871,000	227,938,411	2 49
1925	9,500,000,000	471,106,534	4 96
1926	10,000,000,000	475,393,629	4 75
1927	10,500,000,000	104,324,161	0 99
1928	11,000,000,000	386,516,430	3 51
1929	11,500,000,000	456,495,196	4 54
1930	12,000,000,000	92,439,088	1 38
1931	12,100,000,000	—333,903,133	—2 76
1932	12,200,000,000	—162,488,000	—1 33
1933	12,300,000,000	—123,097,000	—1 00
1934	12,700,000,000	59,304,437	0 47
1935	13,276,000,000	172,761,632	1 30
1936	13,775,000,000	349,664,240	2 54
Average	$10,776,828,000	$154,536,580	1 43

West Virginia Association

The West Virginia Oil and Natural Gas Association will hold its convention at Charleston, September 8 and 9, in the Shrine Mosque Auditorium, opening at 1:30 o'clock Wednesday afternoon. A feature of the meeting will be a discussion of rotary drilling and its practicability in West Virginia. Production methods, including repressuring, will also be a topic. Plugging back with cement and pulling casing without a rig are to be detailed. By-products from natural gas will be the subject of an interesting paper. The state geologist will report on a recent geological survey of oil and gas, with particular reference to the Oriskany sand.

John P. Flynn is president of the association and Edwin Robinson secretary-treasurer.

Albanian Output

Intense activity by the Italian State Railways in the Albanian oil fields during the past two years has boosted production of heavy crude oil from that source to approximately 500,000 bbls. per year. At the current rate of development and with consideration to the probable territory subject to production yield during the next 12 months is expected to be extended to about 2,500,000 bbls. per year. The Albanian crude is to be used in the new Italian hydrogenation installations at Bari and Leghorn, which are now in operation or nearing completion.

Production, Reserves and Future Life of the Bradford Field

By CHARLES R. FETTKE
Professor of Geology, Carnegie Institute of Technology

This is the fifth and concluding article of the series of articles on secondary recovery in the Bradford field by Dr. C. R. Fettke, professor of geology at the Carnegie Institute of Technology, Pittsburgh, Pa.

The first on "Physical Characteristics of the Bradford Third Sand and Relation to Occurrence of Oil" was published in The Oil and Gas Journal of August 5; the second on "Subsurface Waters of the Bradford Field" in the issue of August 12; the third, "Mechanics of Water-Flooding, Evolution of the Practice in Bradford," in the issue of August 19; the fourth, "Relation of Production of Oil by Water-Flooding to Physical Characteristics of Sand in the Bradford Field," in the issue of August 26.

An estimate has been made of the quantity of oil remaining in the Bradford Third sand after the economic limit by ordinary production methods had almost been reached, and of the oil originally in the pool. For this purpose, the pool has been divided into three parts, namely, the northeastern area, the northwest lobe, and the southeast lobe. The two gas-bearing areas have been considered separately. Also in each one of the three main areas, certain portions were separated in which the sand is somewhat thinner, of lower porosity, and usually more interbedded with shale. These, what might be considered marginal, areas are not confined entirely to the edges of the pool—one, for example, divides the southeast lobe longitudinally into two parts.

The entire area had already been divided into squares, 1 mile on a side, and a great many well records had been obtained for each square for mapping the structure. An average thickness for each square mile was computed from the sand thicknesses shown by the records. Only a part of the total thickness of sand shown by the drillers' records, however, is oil-bearing sandstone. A percentage factor was, therefore, applied to the average thickness in each square mile which was based upon the percentage of sandstone shown by the examination of cores and drill cuttings to be present in that part of the field. The average thicknesses for the different areas into which the pool had been divided were then calculated from those averages. The average porosities and saturations assigned to each area are based upon analyses made by the writer of cores believed to be typical of that particular area. The results are tabulated in Table 1.

It is realized that these figures represent only rough approximations, but they are believed to be conservative. In view of the fact that the estimate is based upon an independently gathered set of data and arrived at by a somewhat different method of procedure, the agreement between it and the estimate of 936,174,000 bbls. of oil in place after first drilling and before water-flooding, made by the Pennsylvania Grade Crude Oil Association for the Cole Congressional Oil Investigating Committee, is comparatively close.[1] In making the latter estimate, about 9,000 acres were apparently omitted which the writer has included under marginal areas. This accounts for part of the difference between the two estimates.

Reserves and Future Life of Field

A weighted average recovery per acre-foot of oil-producing sand by present flooding methods has been calculated for each of the different parts into which the Bradford pool can be divided. These averages have been used in estimating the total oil that can be recovered from the pool by water-flooding as now practiced. The results are given in Table 2.

The total production of the Bradford pool by methods utilizing the energy inherent in the reservoir itself is estimated at 203,600,000 bbls., making the total oil originally present in the pool equivalent to 1,249,970,000 bbls. According to these figures, 16 per cent of the oil originally present has been recovered by natural methods and another 24 per cent will have been recovered after the entire pool has been watered out by the methods of water-flooding now in use.

At the end of 1936, 110,250,000 bbls. of oil had already been recovered by water-flooding as distinguished from natural production, leaving 194,397,000 bbls. still to be recovered by flooding. The 1936 production was 14,569,740 bbls. At that rate, the remaining reserve recoverable by present production methods will last another 13 years.

According to the above estimates, 60 per cent of the oil originally in the Bradford pool will remain after the entire pool has been watered out by the present system of water-flooding. It is hardly conceivable, however, that the present methods of water-flooding will not be still further improved before that stage is reached so that the recovery factor will probably be somewhat larger. The figure given represents an average for the entire pool. In those portions of the field where sand conditions are exceptionally favorable, considerably higher recoveries are already being obtained, but even in these areas large volumes of oil remain in the sand after the economic limit by present methods of production has been reached. Whether it will be possible at some future time to recover any considerable percentage of this remaining oil will depend not only on future technological developments but also on economic conditions. The price that can be obtained for the oil will be an important factor.

[1] S. H. Cathcart. Oil and Gas Development in Pennsylvania, 1934, Transactions A.I.M.E., Vol. 114, page 372, 1935.

TABLE 1—ESTIMATE OF OIL CONTENT OF BRADFORD THIRD SAND IN BRADFORD POOL

Part of pool—	Acres	Average thickness of oil-bearing sand, feet	Average total porosity, per cent	Average saturation, per cent	Barrels of oil after natural production had been removed but before water-flooding started
Northeast area	22,500	30	14 4	44	331,790,000
Northwest lobe	13,500	29	14 3	44	191,100,000
Southwest lobe	14,000	26	15 4	44	191,350,000
Knapp dome	7,000	31	13 7	33	76,110,000
Rixford dome	1,500	28	13 7	33	14,730,000
Marginal areas	25,500	22	13 2	42	241,290,000
Total					1,046,370,000
Estimated natural production of Bradford pool					203,600,000
Total oil originally present in Bradford pool					1,249,970,000

TABLE 2—ESTIMATE TOTAL OIL THAT CAN BE RECOVERED BY PRESENT METHODS OF WATER-FLOODING FROM THE BRADFORD POOL

Part of pool—	Acres	Average thickness of oil-bearing sand, feet*	Oil remaining after natural production had been removed, but before water-flooding started, barrels*	Estimated average recovery per acre-foot by water-flooding, barrels	Estimated recovery by by water-flooding, barrels
Northeast area	22,500	30	331,790,000	185	124,875,000
Northwest lobe	13,500	29	191,100,000	145	56,767,000
Southeast lobe	14,000	26	191,350,000	150	54,600,000
Knapp dome	7,000	31	76,110,000	80	17,360,000
Rixford dome	1,500	28	14,730,000	80	3,360,000
Marginal areas	25,500	22	241,290,000	85	47,685,000
Total	84,000		1,046,370,000		304,647,000

*See Table 1.

East Texas A.P.I. Meeting

SHREVEPORT, La., Aug. 30.—The East Texas chapter of the American Petroleum Institute has announced the date for its next meeting as October 5, 1937, in Kilgore, Tex.

Two timely papers are being prepared for delivery. One, "The Use of Malodorants in Gas" will be given by an engineer from United Gas System, followed by a discussion from one of the Texas Railroad Commission engineers, and operators in the pool. The second subject will be "Plug Back Work in East Texas," a symposium prepared by a group of engineers who have had wide experience in the field.

NATURAL GAS EQUIPMENT

presents

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THE NEW N.G.E. TYPE G-1000 REGULATOR
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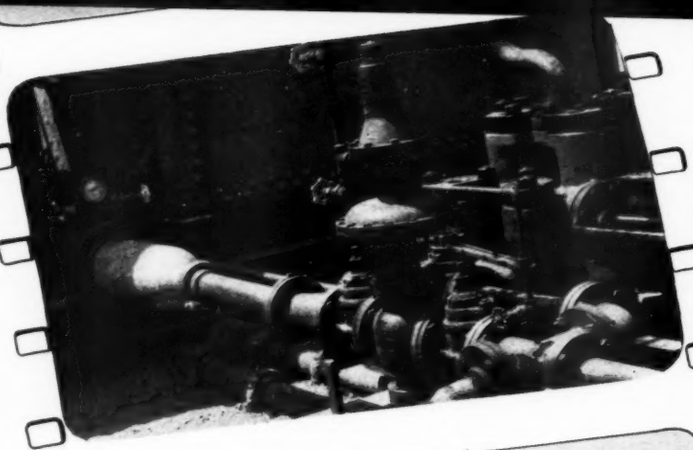

Every drilling contractor and oil company recognizes that increased demands for steam brings the oil field boiler plant to a position of utmost importance in drilling operations. To increase the efficiency of these plants to even a greater extent, Natural Gas Equipment has developed and successfully proved the new N.G.E. G-1000 Boilertrol Regulator.

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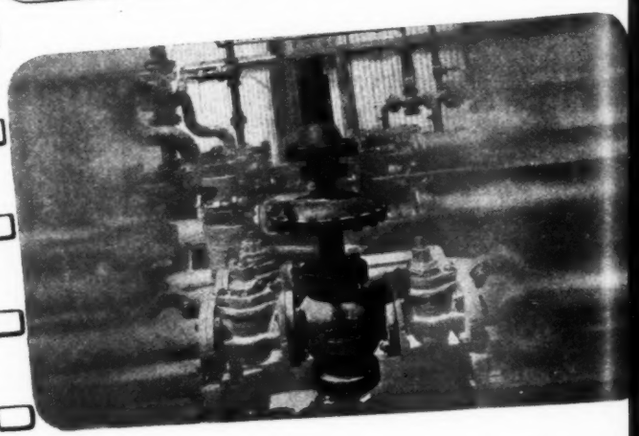

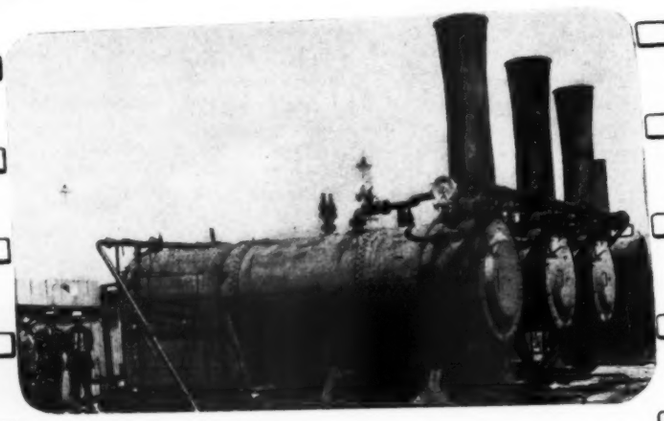

The Boilertrol Regulator accurately and automatically compensates for the most extreme changes in gas supply pressure as well as furnishing the boilers with varying fuel supply in accordance with steam demands upon the boilers. Details of its engineering and its application are available on request. Look to the pioneers for continued leadership.

The design and development of the G-1000 Boilertrol Regulator is a result of every consideration for steam demands made on modern oil field boilers. Modern boiler plants must supply plenty of steam under constant pressure. And the modern boiler plant is no more efficient than the equipment that supplies its fuel.

NATURAL GAS EQUIPMENT

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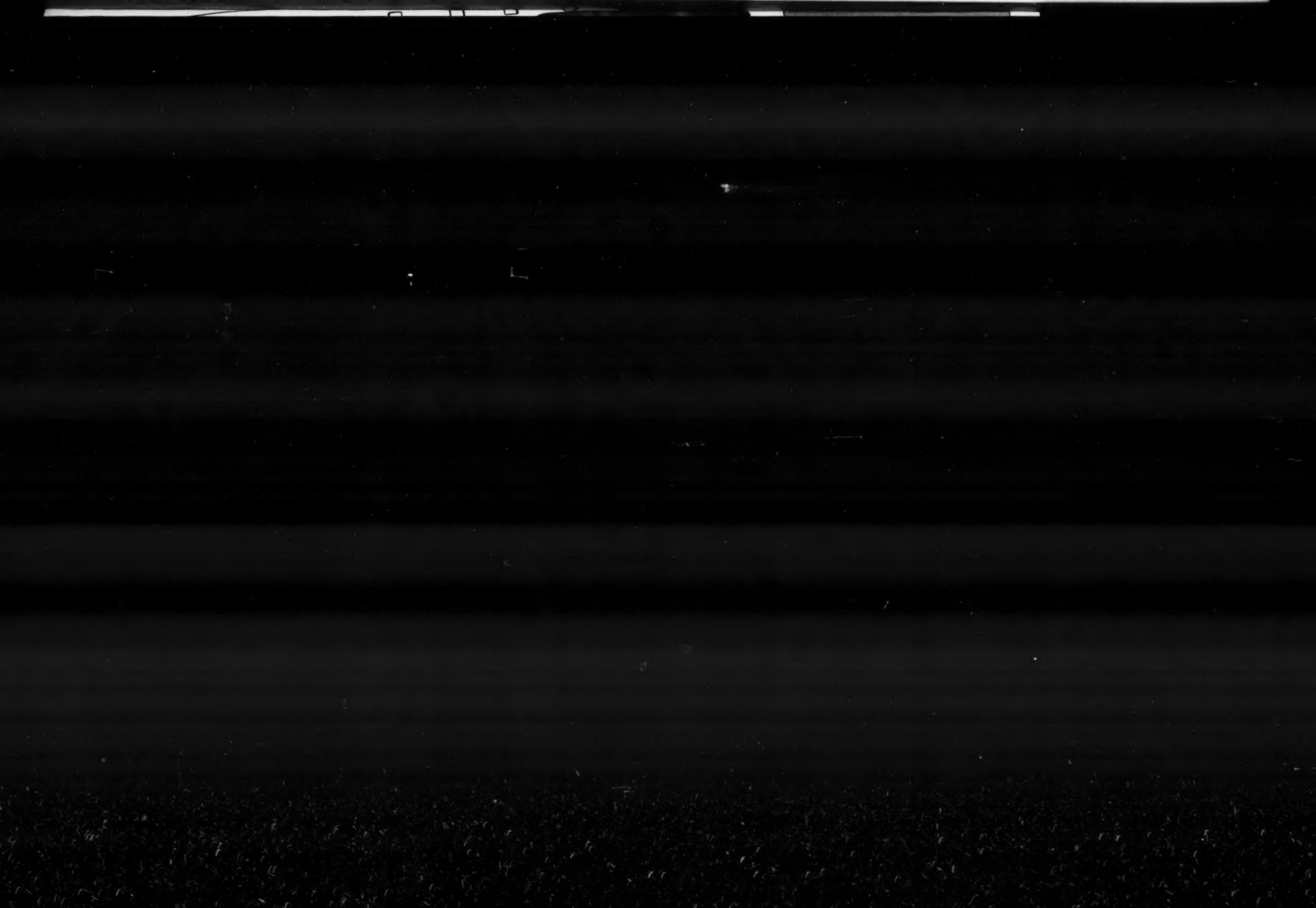


FIELD OPERATIONS

Summarizing the Week's Developments

The most interesting and unexpected feature of the past week occurred in the 62-year old Bradford field in McKean County, Pennsylvania. For the first time in nearly 40 years the field was given a big producer. It started at about 1,200 bbls. a day late Tuesday afternoon and at the end of the week was still flowing 40 bbls. an hour. As Bradford crude brings $2.82 per barrel the well paid for itself in a few days. In the old Greene County, Pennsylvania, field, a 500-bbl. well was completed.

TEXAS

The Amelia field in Coastal Texas has been defined in all directions, an east and a west side outpost having come in as failures in the past week. Hockley County in the northern part of the West Texas district is assured of two new pools about 6 miles apart, and another Hockley pool was extended. Among the Ector County completions of the week were four that started at 5,033 bbls., 2,032 bbls., 1,362 bbls., 2,480 bbls. per day respectively, after they had been acid treated. In Southwest Texas the North Sweden field promises to reach major size, as outpost tests continue to come in as oil wells. Seventy-six wells were completed in Southwest Texas in the seven days.

KANSAS

An oil pool opener was completed in section 14-17-11w, Barton County, Kansas. The Hugoton gas area was extended in section 1-32-39w, Stevens County, and another outpost opened a new gas area in section 11-30-37w, Grant County. A new oil pool was opened in section 15-27-14e, Wilson County, and a new gas area in section 32-28-2e, Sedgwick County. A wildcat in section 5-18-10w extended the Bloomer field of Barton-Ellsworth counties into Rice County, and a 3,103-bbl. well **extended the Weathered pool** of Cowley County one location south.

OKLAHOMA

A Tillman County, Oklahoma, discovery well in section 1-3s-19w, near the Red River, swabbed at the rate of 60 to 70 bbls. of high-gravity oil an hour. A deep pay discovery in the old Milroy field of Stephens County, in section 24-2s-3w, flowed from 115 to 120 bbls. of oil an hour. A gas pool opener was completed in Seminole County.

NEW MEXICO

The Monument field, Lea County, was extended one location northward in section 8-19-37, and another producer was completed on the west edge of the field in section 14-20-36. A wildcat in section 22-21-34, 9 miles west of the Eunice field, was abandoned at 4,144 feet when water intruded.

TEX-LA-ARK

Two wells were completed in the Arkansas end of the Rodessa field and the no-restriction rule applied to the production of Arkansas wells threatens to increase Rodessa's production to the 100,000-bbl. mark soon. Five new wells came in in the Lisbon, Louisiana, field. In the Coastal district of Louisiana, a distillate well was completed on the China Prospect in Jefferson Davis Parish.

Completions in All Fields

(Week Ending August 28, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	79	12	4	95	2,786	2,193
Ohio	8	14	6	28	762	485
Indiana	0	0	0	0	64	129
Kentucky	7	4	9	20	356	168
Illinois	8	0	2	10	86	28
Michigan	6	0	0	6	525	466
Kansas	41	10	15	66	1,682	1,073
Oklahoma	17	1	8	26	1,848	1,762
Texas:						
North Central Texas	18	0	17	35	1,845	1,746
West Texas	43	0	8	51	1,787	973
Texas Panhandle	14	2	1	17	484	392
East Texas	65	0	0	65	1,498	1,816
East Central Texas	10	0	2	12	456	207
East Texas Border	2	0	1	3	247	54
Gulf Coast Texas	24	0	3	27	998	798
Southwest Texas	52	1	23	76	2,172	1,864
Total Texas	228	3	55	286	9,487	7,850
North Louisiana	12	3	6	21	420	450
Gulf Coast Louisiana	4	0	1	5	305	348
Total Louisiana	16	3	7	26	725	798
Arkansas	4	0	1	5	102	64
Montana	6	0	3	9	140	150
Wyoming	1	0	0	1	69	69
Colorado	0	0	0	0	9	19
New Mexico	9	0	1	10	494	374
Utah	0	0	0	0	2	5
California	17	1	6	24	1,003	748
Total United States	447	48	117	612	20,140	16,381
Total previous week	462	44	129	635		
Difference	15	4	12	23		

Outstanding Fields—Highlights

(Week Ending August 28, 1937)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Amelia	1	11	3	1,850	81	4,837
Hastings	4	24	9	5,286	279	19,837
McCampbell	2	16	5	465	47	3,670
Saxet	7	25	8	1,425	530	41,400
North Sweden	2	13	3	445	39	3,900
East Texas	62	94	65	3,057	23,410	477,298
Talco	7	37	9	3,228	442	35,800
Ector County	27	93	13	15,280	575	23,600
Winkler County	12	54	7	3,137	1,384	47,900
OKLAHOMA						
Oklahoma City	1	5	0	0	1,133	156,550
Fitts	4	36	5	2,791	855	93,750
Billings Deep sand	2	7	0	0	43	8,000
KANSAS						
Ellis County	10	50	9	6,216	173	8,095
Reno County	2	16	3	860	471	18,295
Russell County	14	52	8	6,513	826	36,430
Rice County	4	45	3	1,195	957	44,295
NEW MEXICO						
Lea County	30	103	8	2,620	1,428	105,340
LA-TEX-ARK						
Rodessa, Ark.	3	11	2	1,584	7	2,510
Rodessa, La.	3	14	4	3,990	405	51,125
Rodessa, Tex.	7	21	2	438	336	38,930
Lisbon, La.	9	30	5	942	83	13,425
Jennings, La.	1	13	3	956	67	9,979
MICHIGAN						
Buckeye	12	71	4	1,635	196	19,786

Eastern Field Report

By STAFF CORRESPONDENT

WESTMORELAND TEST 7,642 FEET, SHOWS INCREASED GAS

PITTSBURGH, Pa., Aug. 30.—Interest is quickened in the deep tests with an increase of gas in the test of the Potter Development Co., William E. Snee and others on the Indiana Savings & Trust Co. lease on the Laurel Ridge dome in Fairfield Township, Westmoreland County, Pennsylvania. At 7,640 feet, additional gas was picked up increasing the present gauge to 500,000 feet a day. At 7,642 feet drilling was suspended and the boiler is being moved back before deepening.

With the corrected top of the Onondaga at 7,578 feet, the tools are now 64 feet in that formation and the samples appear the same as those taken in the test on Chestnut Ridge, No. 1 Summit Hotel, South Union Township, Fayette County. There the gas increases came at successive depths. The thickness of the present formation is unknown but with the hole cased to the top of the first gas no difficulties that will prevent exploring deeper than in the Summit well are expected.

The best oil producer in Southwest Pennsylvania in many months was completed on the Mattie I. Scott farm in Center Township, Greene County. It was the No. 2 of J. B. Orndoff, which topped the Nineveh Thirty-foot sand at 3,187 feet and at a depth of 3,213 feet it produced 220 bbls. the first 10 hours and continued to flow at the rate of about 20 bbls. an hour, or about 500 bbls. the first 24 hours. There was a volume of 500,000 feet of gas along with the oil.

The Mattie Scott farm is at the south end of the Nineveh Thirty-foot extension and on that line good wells have been completed on the J. W. Milliken, J. H. Orndoff and Samuel Harvey farms. On the Milliken farm, Carnegie Natural Gas Co. is about to start No. 3. On the J. H. Orndoff farm that company is drilling at 2,420 feet with the Big Injun topped at 2,337 feet.

In South Franklin Township, Washington County, Dunn Mar Oil & Gas Co. completed No. 3 J. T. Baldwin in the Fifth sand and it is showing for 75 bbls. a day. Sand was topped at 3,018 feet with the oil at 3,020-25 feet.

In the same township, Union Gasoline & Oil Corp. completed No. 4 B. F. McClain farm in the Fifty-foot sand and it made a flow of 60 bbls. on reaching the sand.

In Wayne Township, Greene County, Equitable Gas Co. completed a test on the B. F. Thralls farm at 2,595 feet as a gas well. The Gantz sand was at 2,570 feet with gas starting at 2,591 feet which gauged 2,853,000 feet a day. In Morris Township, Milliken, Myers & Hoskinson deepened No. 1 Ruth Bane to 3,027 feet and it was dry. The former depth was 2,702 feet.

In Center Township, Greene County, Manufacturers Light & Heat Co. is drilling at 2,065 feet on the W. L. Fordyce farm. In Freeport Borough, Null & Milliken are fishing at 2,158 feet on the W. P. Hoskinson No. 3 which is being deepened.

In Franklin Township, Greene County, the Greensboro Gas Co. is drilling at 2,310 feet on the Calvin Ulery farm. In Springhill Township, Nelson M. Richard Co. is cementing at 1,340 feet on the Russell Sammons farm.

In Richhill Township, Greene County, Carnegie Natural Gas Co. is drilling at 975 feet on the Sadie A. Connor farm and ran 10-inch casing to 778 feet. This is north of the producer on the Jacob Johns farm and will be an interesting test.

In Richhill Township, Greene County, the Natural Gas Co. of West Virginia is down 2,903 feet on the O. M. Grinnage farm. The top of the Fifty-foot sand was at 2,835 feet with a show of gas at 2,847 feet. Smith McCracken moved to a new location on the Asa Hughes farm and has spudded in.

Washington County

In Amwell Township, Carnegie Natural Gas Co. is down 2,055 feet in No. 3 Carrons. The Equitable Gas Co. is drilling at 1,989 feet in No. 3 S. A. Reese. Penn Ohio Gas Co. is deepening No. 1 John Russell, with the top of the Thirty-foot sand at 2,826 feet and a heavy gas volume at 2,844-49 feet. Union Gasoline & Oil Corp. is drilling at 1,882 feet in No. 7 A. O. Vankirk. Moore, Orrill and others are down 2,939 feet in the No. 4 J. H. Hazlett. The Nineveh Thirty-foot sand was at 2,833-84 feet, with 100,000 feet of gas at 2,857-60 feet.

In South Franklin Township, Carnegie Natural Gas Co. is down 2,700 feet in No. 3 M. G. Manon. Gantz sand was at 2,664-92 feet with the Fifty-foot sand topped at 2,698 feet. In the Union Gasoline & Oil Corp. No. 4 B. F. McClain, Thirty-foot sand was at 2,639-40 feet, with gas at 2,640 feet and 2,644 feet, totaling 480,000 feet a day.

In South Strabane Township, the Manufacturers Light & Heat Co. is drilling at 1,220 feet in the R. O. McKahan test. In North Strabane Township, McClelland Brothers are drilling below 1,735 feet on their own property. In Peters Township, Carnegie Natural Gas Co. had reached 1,536 feet on the McMurray farm.

In Nottingham Township, Robinson Brothers were drilling at 280 feet on the Frank Anthony farm. On the J. D. Amos farm in Somerset Township, Victor D. Behm is down 120 feet. In South Franklin Township, F. K. Fawcett and others are drilling at 2,045 feet on the Tucker heirs farm.

In Greene County, Wayneburg Home Gas Co. was drilling at 2,740 feet on the Marguerite Grover farm. The Gordon Stray sand was at 2,525-60 feet, with a showing of gas at 2,530 feet.

Deep Tests

On Chestnut Ridge in South Union Township, Fayette County, Potter Development Co., William E. Snee and others are down 700 feet in No. 2 Summit Hotel. In North Union Township, Frank Fairman and others have reached 300 feet on the Louisa Varndell farm.

In Washington County, the test of Norwood P. Johnston and others on the James McBurney farm south of Hickory in Mount Pleasant Township is still cleaning out after the gas blowout. The top of the lost tools has been reached.

In Allegheny County, South Penn Oil Co. and others are drilling at 4,575 feet on the Christian Z. Schove farm in Hampton Township. In Lawrence County, Carnegie Natural Gas Co. is down 4,325 feet on the W. A. Currie farm, Shenango Township, and from 4,298 feet has been drilling in lime. In Mercer County, the Petroleum Development Co. started drilling the test on the A. S. McCullough farm in Jefferson Township.

WEST VIRGINIA

Five small oil producers were completed in West Virginia during the week. In Calhoun County, the Richter Oil Co. No. 7 Mary J. Kelley, in Sheridan district, had Salt sand at 1,864 feet and is showing for 5 bbls. a day. In Lee district, Starcher and Foster, on the R. W. Hall farm, have a 1½-bbl. pumper in the Injun sand.

In Jackson County, Mountain Iron & Supply Co. completed No. 7 J. W. Kelly and others in Washington district in Salt sand at 1,578 feet, and it is starting at 2 bbls. a day.

In Wirt County, Andrews & Roberts, on the G. W. Gillespie farm in Clay district, have a half-barrel pumper in the Injun sand at 905 feet. In the same district, W. C. Patterson drilled No. 27 Camden to 1,505 feet through the Injun sand and it is dry.

In Wood County, the South Penn Oil Co. completed No. 27 Nora J. Rolston in Union district in the Berea grit at 1,295 feet. It will make a very light pumper.

Gas Wells

In Doddridge County, L. G. Pigott completed a 100,000-foot gasser on the Homer Drane farm in West Union district in the Gordon sand at 2,520 feet.

In Cabell County, the Fairfax Gas Co. deepened No. 1 Leonard Paugh, in McComas district, to 3,135 feet. Brown shale, 2,050-3,115 feet, yielded 188,000 feet of gas.

In Gilmer County, Chartiers Oil Co. completed No. 14 Daniel Huffman, in Center district, in Slate at 3,616 feet and has a gas well gauging 250,000 feet a day.

In Harrison County, the Lumberport and Shinnston Gas Co. test on the Ernest Robinson farm in Eagle district is in Speechley sand at 2,978 feet and will make a gas well.

In Kanawha County, the Cambridge Gas Co. completed No. 13 Garnet Wiseman in Washington district at 3,809 feet as a small gas well. It gauges 68,000 feet a day.

In Lincoln County, the United Fuel Gas Co. completed a good well on the Jennie Jones, Min. No. 4,740, in Sheridan district, at 3,250 feet. The gas gauged 2,500,000 feet a day at 2,835-3,235 feet.

In Ritchie County, W. H. Mossor drilled on the Blackburn Hayhurst farm in Murphy district through Squaw sand to 2,086 feet and it was dry. The hole was abandoned.

In Tyler County, Hope Natural Gas Co. completed No. 4 Martha O. Goff farm in Booths Creek district as a 1,250,000-foot gas well in Fifth sand at 1,547 feet.

In Wayne County, the Huntington Oklahoma Gas Co. test on the C. C. Preece farm in Lincoln district was completed at 3,018 feet. Gas at 2,025-2,700 feet gauges 82,000 feet a day. The Corniferous lime was topped at 3,008 feet.

In Wetzel County, Manufacturers Light & Heat Co. completed No. 2 Foland in Proctor district at 2,223 feet as a good gas well. The Maxton sand was at 2,205-21 feet with 850,000 feet of gas at 2,207-14 feet.

Oriskany Gas Field

Only one well was completed in the deep sands of Kanawha County and it was in the Campbells Creek pool. In Malden district, the Owens Illinois Glass Co. completed L. A. Myers No. 11 at 5,040 feet in the Oriskany sand and it is good for 656,000 feet a day after shot.

There were numerous new locations. In Union district, Godfrey L. Cabot, Inc., made a location for a test on the Fred Strasser and others farm on Martin Branch, 1,900 feet southeast of the gas well on the Sarah A. Null farm. About 2,000 feet south of the Null farm, the United Fuel Gas Co. made a location for No. 4,770 on the J. A. McCormick and others farm.

In Poca district, Godfrey L. Cabot, Inc., has made an interesting location for a test on the Myrna and Homer Jarrett farm 1½ miles north of Sissonville. This will be the most northerly test on the area.

In Poca district, the United Carbon Co. topped the Corniferous lime at 4,784 feet on the Curtis Harper and others farm. On the Mary C. Young heirs farm, Columbian Carbon Co. reached Corniferous lime at 4,768 feet. In this district, the Spartan Gas Co. topped Oriskany sand at 5,024 in the No. 2 Avilee Baldwin. Brawley Reid Gas Co. is down 4,790 feet on the L. E. Campbell farm.

In Union district, Godfrey L. Cabot, Inc., is drilling at 3,412 feet on the C. W. Richardson farm with 165,000 feet of gas coming from the shales. Ajax Gas Co. has reached 1,410 feet on the Dunbar Development Co. and is rigging up on the L. B. and B. F. Bess farm. Mullins Gas Co. has reached 1,250 feet on the Sarah S. Dawley farm.

In Malden district, the South Penn Oil Co. cemented casing in No. 4 Kate Scott at 5,059 feet and it will be drilled in this week. The Glenn Oil & Gas Co. is drilling at 1,200 feet on the L. L. Williams tract. Godfrey L. Cabot, Inc., has reached 1,600 feet on the Roane Land Co. test.

(Continued on Page 80)

Southwest Texas District

By
GEORGE WEBER

FINISH 76 WELLS IN WEEK; NORTH SWEDEN EXTENDED

HOUSTON, Tex., Aug. 30.—The North Sweden field again headlined Southwest Texas development this week. With two outpost tests showing oil the field shows promise of continuing its rapid expansion and of ranking with the larger fields of the Laredo district. Elsewhere in Southwest Texas important discoveries were lacking, although some of the developments of the preceding week carried through to successful completion. The Alta Mesa field is assured of a fourth producing sand. North of the field in Brooks County gas was produced by a wildcat.

The Fault Line is seeing still greater activity. Caldwell and Guadalupe counties rank among the busiest counties in the district at present, with even greater activity probable following recent discoveries. The Lower Coastal area, although quiet from the standpoint of startling discoveries, still maintains the most drilling. This was borne out by the large number of completions there during the past week. Saxet has a possible eastward extension to production in the 6,700-foot Frio sand.

Well completions and abandonments ran high this week, with a total of 76 tests finaled. Caldwell and Nueces counties led in new production.

The North Sweden field has been consistently extended in nearly all directions since its early development this summer. Following north, south and east outpost completions, this week brings possible inclusion in the proven area, acreage to the northwest and south. A wildcat, drilling in Block 59 of Survey 238, the V. L. Blanchard No. 1 Benavides may mark an important extension to the field. The test failed to recover oil sand cores in the regular sand of the field. An attempted drill stem test made at 4,786-4,876 feet failed when operators were unable to close the testing tool. An electrical survey made in the hole, however, showed prospective sands at the following levels: 4,588-4,617, 4,778-82, 4,792-4,817, 4,825-45 and 4,869-76 feet.

After running the survey operators cored ahead. The Pettus sand in the Cockfield was encountered at 5,395-5,411 feet. On a drill stem test of that body, using three-eighths inch chokes both top and bottom, 500 feet of oil and 220 feet of salt water was recovered in 18½ minutes at a working pressure of 25 pounds.

The sand body corresponds to that pay, producing in the Navarro Oil Co. No. 1 Rossi. The Navarro well was completed three weeks ago for a westward extension, at the same time opening initial production in the new Pettus sand. The Blanchard wildcat cored the sand about 60 to 65 feet lower than the Navarro well. Blanchard is coring ahead, and at the latest reports was drilling below 5,400 feet.

On the southern side of the North Sweden field, still more development is taking place. The Standard Oil Co. of Kansas, the most active company in the field at present, has cored oil sand at 4,751-75 feet in the No. 1 Southland Life. The outpost test is located in the NE cor. section 12 of the Santos Flores grant.

The test is located between the Sweden and North Sweden fields whose northeast-southwest trend corresponds to that of most of the producing areas of the Laredo district. Its completion may bring important further developments in the immediate area. The test has casing set at 4,747 feet and will drill plugs early in the coming week for completion attempt.

Meanwhile, operations are going forward to make a producer of the Woodley Petroleum Co. No. 1 Parr, on the eastern side of the North Sweden pool. The mile outpost intermittently flows and goes dead, and operators are reported to be installing flow collars to complete the well. If all three of the current prospective North Sweden field extensions are successful, the field's proven acreage will be practically doubled. However, character of the sand, and the presence of two horizons scotch the making of any predictions concerning the field's future.

Webb County activity is picking up, with interest increasing in the Killam and Oilton fields. The latter area, particularly rates mention, for although recently discovered, it has two producers, three rigs are moving into the field to develop it, and a number of new locations have been staked in the immediate area by four different operators.

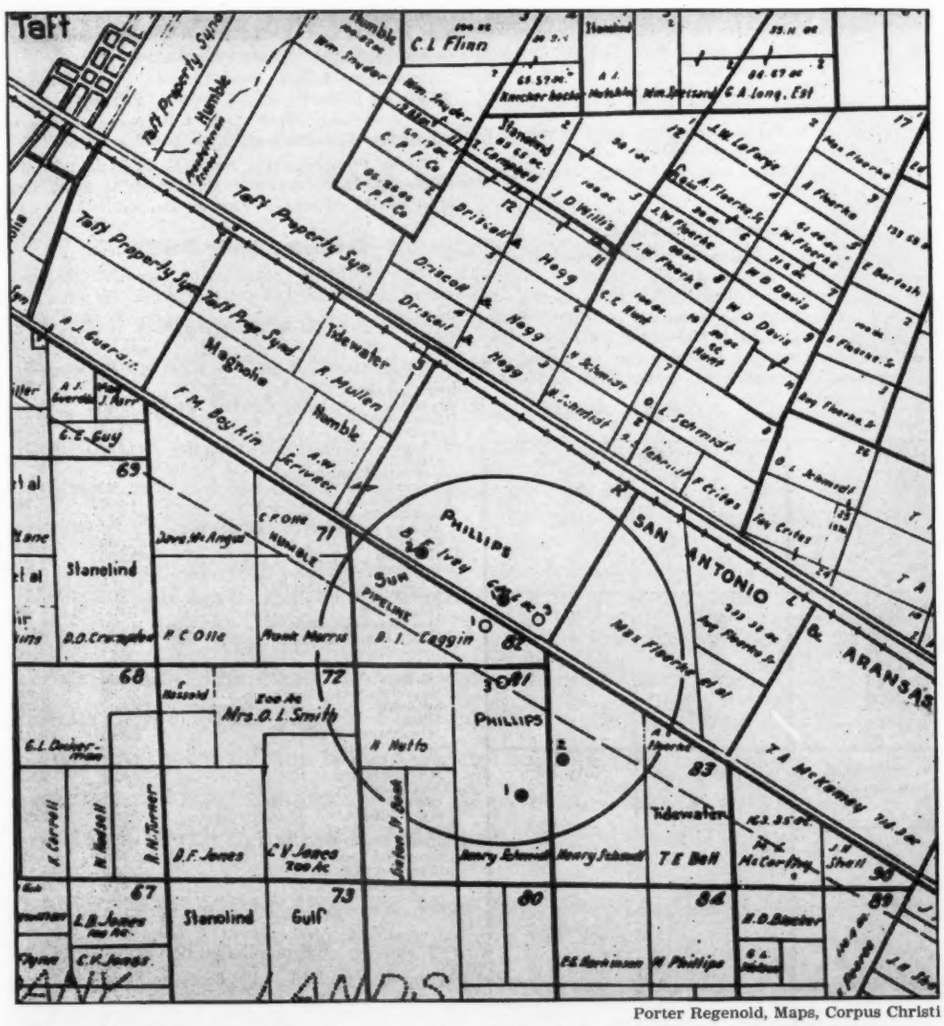
To the south in Brooks County, the Standard Oil Co. of Texas has completed a wildcat for a gasser. The No. 1 Mestina, located 6 miles north of the Standard of Texas production in the Alta Mesa field, came in through perforations at 1,911-31 feet. The test was carried to a total depth of 6,786 feet, and operators plugged back successively to various sands which showed possibilities of production while coring.

In the Alta Mesa field, the company's No. 5 Mestina is being completed in a new deep sand at 4,513-27 feet. Last week the test flowed at the rate of 280 bbls. per day through a one-quarter inch choke. It was later killed to pull tubing, and operators will install flow valves to improve the production.

Three fields, Saxet, McCampbell and Flour Bluff lead the Lower Gulf Coast area in activity, and are mainly responsible for its present mild drilling boom. Saxet this week gained eight new producers, totaling in initial production, 1,425 bbls. per day. The daily average production of Saxet is at present nearly 41,500 bbls., the highest it has been and probably the highest it will be for some months to come. The allowable of the Frio and other wells in the field will be cut September 1, possibly having a declining influence on the development of the field.

During the week, an eastern edge test, Southern Minerals Corp. No. 5 Elder showed recovery of 15 stands of oil and 2 stands of water on a drill stem

(Continued on Page 82)



Porter Regenold, Maps, Corpus Christi

Midway field, San Patricio County, is being steadily developed by Phillips Petroleum Co. whose No. 1 Schmidt opened the field several weeks ago. Three rigs are now active and considerable acreage has been proven for production. The field is halfway between the towns of Taft and Gregory, northeast of Corpus Christi.

Kansas Developments

By DAL DALRYMPLE

OPEN GAS AREA IN SEDGWICK; OIL FIELD IN WILSON COUNTY

Discoveries of new pools and extensions of older areas are so frequent in Kansas these days that they have become almost commonplace. The past week provided its quota of oil and gas strikes, results included completion of a Barton County oil pool opener and a Grant County gas pool opener, with several other discovery wells and extensioners near completion.

Bridgeport Machine Co. No. 1 Habiger, NW SW NW section 5-18-10w, extended the Bloomer pool of Barton and Ellsworth counties into Rice County. On first production test it showed for 1,920 bbls. of oil daily, with an estimated 4,500,000 feet of gas. Tubing was being run preparatory to acidizing. Total depth was 3,005 feet in Lansing lime topped at 2,950 feet.

The Weathered pool of Cowley County was extended one location southward at Lloyd, Frost & Study No. 4 Wilson, SE SE SW section 33-31-3e, which made potential of 3,103 bbls. of oil at 3,300 feet, approximate total depth. It is the seventeenth Siliceous lime producer in the field.

A new gas area was opened in Sedgwick County at W. G. Talbott and others No. 1 Downs Estate, SE SE NW section 32-28-2e, 9 miles southeast of Wichita. It produced 13,396,000 feet of gas daily at total depth of 2,235 feet in Stalnaker sand. It is thought to be the largest gas well to be drilled in the county.

Opening of a new oil pool in Wilson County, in the old southeastern Kansas stripper district, was indicated at Paul R. King and C. E. King No. 1 Johnson, NE SW SE section 15-27-14e, 10 miles north of Fredonia. It is bottomed at 1,345 feet in the first break in Mississippi lime, and swabbed 5½ bbls. of oil an hour for two hours. Operators had trouble with high gas-oil ratio and decided to pull tubing and attempt to make a flowing test.

Wildcat Completions

Republic Natural Gas Co. No. 1 Bloomer, NE NW NW section 14-17-11w, wildcat west of the Bradford area and northwest of the Bloomer field in Barton County, pumped 208 bbls. of oil in the first four hours after acidizing, 188 bbls. the second four hours and made potential of 1,128 bbls. It topped Siliceous lime at 3,320 feet, set 7-inch casing at 3,321 feet and was bottomed at 3,338 feet.

Kuhn Brothers and others No. 1 Youngren, SE SE NW section 1-32-39w, wildcat on the northwest edge of the Hugoton field, Stevens County, produced 8,250,000 feet of gas and was completed at 2,600 feet, total depth. Seven-inch casing was set at 2,380 feet.

Rex & Morris and others No. 1 Lanier, NE NE NW section 10-30-5e, Cowley County wildcat, topped Mississippi lime at 2,865 feet and was dry and abandoned at 2,917 feet, total depth.

Douglas & Gear No. 1 Strickler, SW NW NE section 30-32-1w, wildcat in Sumner County, found Wilcox sand at 4,265 feet, Siliceous lime 4,407 feet, and was dry and abandoned at 4,457 feet, total depth.

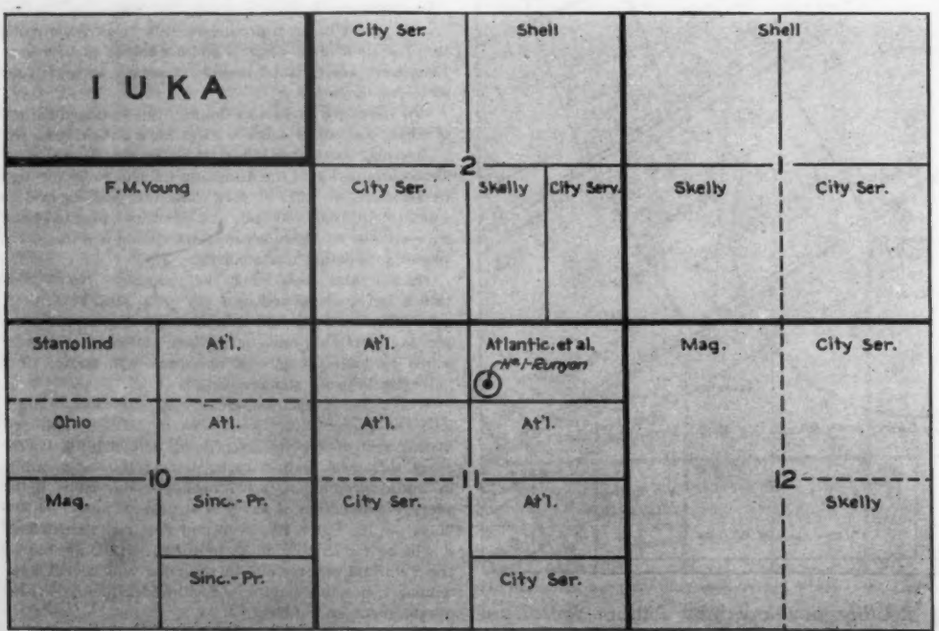
In Harper County, Magnolia Petroleum Co. No. 1 Freeman, SW NW SW section 3-31-6w, wildcat, topped Dolomite at 4,690 feet, Siliceous lime 4,826 feet, total depth 4,896 feet, had 600 feet of water in the hole and was dry and abandoned.

In Ellsworth County, C. E. W. Skiles and others No. 1-A Sturn, SE SE SW section 31-17-9w, wildcat, found Siliceous lime at 3,237 feet, had a hole full of water at 3,255 feet, total depth, and was dry and abandoned.

Helmerich & Payne and others No. 1 Haines, SW cor. section 9-25-5w, Reno County wildcat, had Silicious lime at 3,968-91 feet, total depth, and was dry and abandoned.

Failure in Hamilton

A failure was registered in the Syracuse dome area of extreme western Kansas at Denver Producing & Refining Co. and associates No. 1 Porter, SW SW NE section 30-25-41w, wildcat in Hamilton County. It had Mississippi lime at 5,454 feet, Viola lime 6,180 feet, Simpson 6,360 feet, Siliceous lime 6,402 feet, and was dry and abandoned when water intruded at 6,453 feet, total depth.



Mid-Continent Map Co., Wichita

Atlantic Refining Co. and associates were drilling deeper at No. 1 Runyon, section 11-27-13w, pool opener in Pratt County

Morris and others No. 1 Koening, SE SE NW section 35-25-15e, wildcat in Woodson County, topped Mississippi lime at 1,422 feet, had a hole full of water and was abandoned at 1,458 feet, total depth.

Wildcat completions of the previous week: Stanolind Oil & Gas Co. and others No. 1 National Bank, SE SE SW section 36-16-13w, Barton County, dry and abandoned at 3,425 feet, total depth.

Sam Murphy No. 1 Beck, NE cor. section 17-17-12w, Barton County, dry and abandoned at 3,419 feet, total depth.

Imo Oil & Gas Co. and others No. 1 Watkins, SE cor. section 14-22-7w, Reno County, total depth 3,560 feet, dry and abandoned.

E. J. Shaffer and others No. 1 Epp, SE cor. section 15-23-3w, Harvey County, dry and abandoned at 3,915 feet, total depth.

Lilley and others No. 1 Wall, SW SE SE section 25-25-13e, Woodson County, dry and abandoned at 1,475 feet, total depth.

Becker Brothers & Yearout No. 1 Bonner, C E half NW SW section 34-25-14e, Woodson County, total depth 1,560 feet, dry and abandoned.

Panhandle Eastern Pipe Line Co. No. 1 Taggert, C section 11-30-37w, Grant County, had gas sand at 2,435 feet, total depth 2,885 feet, plugged back to 2,531 feet, and produced 2,750,000 feet of gas.

Lewis Production Co. No. 1 Feaster, SE NW SW section 36-32-5e, dry and abandoned at 3,520 feet, total depth. It was in Cowley County.

Estimated Daily Production

Estimated daily production of Kansas for the week ending August 28, and for the preceeding week, was as follows:

	Barrels	
	Aug. 28	Aug. 21
Oxford City	1,600	1,575
Burrton	14,525	14,475
Ritz-Canton	5,850	5,875
Graber	2,800	2,475
Hollow-Nikkel	2,800	2,825
Lerado	2,200	2,175
Voshell	2,400	2,375
Wellington	3,300	3,250
Ellsworth County:		
Lorraine	3,900	4,435
Other pools	1,460	1,285
Rice-Barton counties:		
Bloomer	4,950	5,225
Chase	7,300	7,850
Geneseo	2,200	2,575
Raymond	1,225	1,950
Silica	22,400	18,875
Keesling	1,300	1,625
Hauschild	1,100	400
Miscellaneous Rice	8,770	9,570
Miscellaneous Barton	5,670	5,190
Russell County:		
Fairport	1,915	1,705
Gorham	2,280	1,605
Russell	2,335	1,720
Sullivan	8,880	9,720
Trapp	12,625	10,520
Miscellaneous Russell	8,395	8,025
Sedgwick County:		
Valley Center	1,045	1,065
Miscellaneous	2,890	2,950
Ellis County:		
Bemis	4,275	3,700
Miscellaneous	3,820	2,565
Kingman County	555	560
Stafford County	3,325	3,405
Greenwood County	10,100	9,975
Butler County	15,350	15,310
Other fields	27,810	27,220
Total Kansas	201,350	194,050

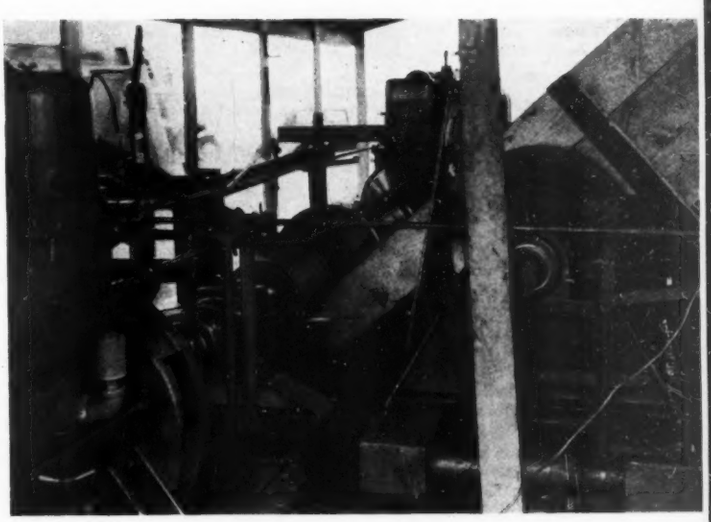
Russell County

Eleven wells were completed in Russell County the past week. W. I. Southern, Inc., No. 7 Sellens heirs B, NW SW NW section 30-15-13w, Trapp field, had Siliceous lime at 3,290 feet, total depth, 3,305 feet, was acidized, pumped 155 bbls. in four hours and made potential of 935 bbls. Same operator's No. 8 Sellens heirs B, NE SW NW section 30-15-13w, Siliceous lime 3,309 feet, total depth 3,313 feet, acidized,

Rose Spring Drilling Co. finds ATLAS DIESELS Profitable!

A pair of 6 cylinder, 7"x8½", 120 H.P. Atlas Drilling Diesels as employed in the Atlas-Richards Hookup illustrated in the line drawing below.

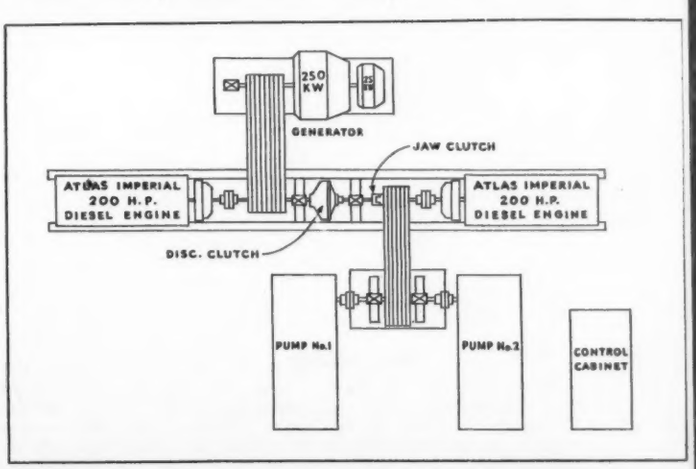
This is the trademark that is recognized in the construction industry the world over, and is fast becoming known as the symbol of the acme in Drilling Diesels.



THE two Atlas Diesels shown in the accompanying picture are owned by the Rose Spring Drilling Company of Wichita and have been working exclusively in western Kansas, where they have proven to be one of the most profitable rigs which this company operates.

The rig consists of a pair of 6 cylinder, 7" x 8½" enclosed type Atlas Diesels. The arrangement is a straight in line, full mechanical hookup, which drives the draw works through a reverse clutch. The left hand engine drives the mud pump and the right hand engine drives the reverse clutch. In coming out of the hole with pipe, the mud pump can be disengaged and the power of both engines compounded to drive through the reverse clutch.

This rig has been drilling in country where the usual depth is around 3500 feet, but it has drilled wells to 4600 feet, using 4" drill pipe. The usual time on a well is about 12 days under surface pipe. This rig has operated for two years continuously and not a minute of shut down time chargeable to the engines. During this period over 20 wells have been drilled to a total depth in excess of 75,000 feet.



SEND FOR A COPY OF OUR BULLETIN "ATLAS IMPERIAL DIESELS FOR ALL OIL FIELD SERVICE"

ATLAS IMPERIAL DIESEL ENGINE CO.

OAKLAND, CALIFORNIA · MATTOON, ILLINOIS

Oil Country Distributors

K. S. RICHARDS · WICHITA · OKLAHOMA CITY · FORT WORTH · HOUSTON

ATLAS IMPERIAL

pumped 395 bbls. of oil in four hours, potential 2,374 bbls.

Gulf Oil Corp. No. 9 Hoffman, SW NW SW section 31-15-13w, Siliceous lime 3,254 feet, total depth 3,261 feet, swabbed 303 bbls. of oil in six hours, acidized, pumped 322 bbls. in four hours, potential 1,936 bbls. Same company's No. 5 Mollie, NW NE SE section 25-15-14w, Siliceous lime 3,321-25 feet, total depth, acidized, pumped 489 bbls. of oil with 7 per cent water in eight hours, potential 1,732 bbls.

Skelly Oil Co. No. 6 Neidens, SW SW SE section 32-15-13w, Siliceous lime 3,292 feet, total depth 3,298 feet, acidized, pumped 452 bbls. of oil in four hours, potential 2,721 bbls.

Cities Service Oil Co. No. 7 Boomhower, NE SE NE section 25-15-14w, Siliceous lime 3,306 feet, total depth 3,310 feet, acidized, potential 1,290 bbls. of oil. Same company's No. 8 Boomhower, NE NW NE section 25-15-14w, Siliceous lime 3,322-26 feet, total depth, acidized, potential 2,377 bbls. of oil.

Smoky Hill Oil Corp. No. 13 Miller, SW SW NE section 31-14-13w, Kansas City lime 2,859 feet, total depth 2,934 feet, acidized, potential 1,052 bbls. of oil.

Phillips Petroleum Co. No. 2 Carroll, SW SE SE section 18-14-14w, Kansas City lime 2,997 feet, total depth 3,047 feet, acidized, pumped 415 bbls. of oil in four hours, potential 2,494 bbls.

Central Petroleum Co. No. 7 Foster B, NE SW NE section 3-14-15w, Gorham sand 3,297 feet, total depth 3,306 feet, pumped 415 bbls. of oil in four hours, potential 2,362 bbls.

Transwestern Oil Co. No. 3 Katharina Polcyn, NW NE NW section 14-14-15w, Gorham sand 3,247-50 feet, total depth, pumped 228 bbls. of oil in four hours, potential 1,248 bbls.

Other Completions

Russell County completions of the previous week: Phillips Petroleum Co. No. 2 Downing, SW SE SW section 19-13-14w, total depth 3,275 feet, potential 1,176 bbls. Cities Service Oil Co. No. 3 Vaughn, NW SW SW section 17-14-14w, total depth 3,056 feet, potential 1,290 bbls. Same company's No. 6 Boomhower, NW SW NE section 25-15-14w, total depth 3,316 feet, potential 1,562 bbls. Lario Oil & Gas Co. and others No. 1 Waudby, SE SE NE section 26-14-15w, total depth 3,183 feet, potential 500 bbls. Carter Oil Co. No. 3 Josephine, SE cor. section 7-15-13w, total depth 3,231 feet, potential 1,704 bbls. Same company's No. 2 Detrick, C S half S half SW section 8-15-13w, total depth 3,189 feet, potential 2,393 bbls. Coralena Oil Co. No. 1-B Sellens heirs, SE NE NW section 30-15-13w, total depth 3,283 feet, potential 2,886 bbls.

New work in Russell County: Darby Petroleum Corp. No. 4 Michaelis, SE cor. section 36-15-14w, moving in tools; Cities Service Oil Co. No. 12 Boomhower, SE NE NE section 25-14-15w, location; same company's No. 11 Boomhower, SE NW NE section 25-15-14w, building rig; same company's No. 10 Boomhower, SE SW NE section 25-15-14w, rig; same company's No. 4 Bender A, NE SE NW section 25-15-14w, rig; same company's No. 11 Eichman, SW SW SE section 12-15-14w, rig; W. I. Southern, Inc., No. 11 Boomhower A, SE NW NE section 30-15-13w, rig; Cities Service Oil Co. No. 1 Maag, SE SW SE section 7-15-13w, rig; Transwestern Oil Co. No. 9 Polcyn, SE SE SW section 11-14-15w, rig; J. C. Shaffer No. 2 Cramm, NW NW SE section 11-14-15w, rig; Darby Petroleum Corp. No. 5 Dumler B, SE SE NW section 11-14-15w, rigging up; Alva Billings No. 4 Herbel A, SE SE NW section 25-14-14w, rig; Stearns & Streeter No. 5 Miller, SW SE NW section 31-14-13w, rigging up; R. H. Shields No. 3 Letsch, NW NE SE section 27-14-13w, rig; Cities Service Co. and Texas Co. No. 1 Boxberger B, NE cor. section 23-13-15w, drilling below 350 feet.

Rice County

Continental Oil Co. No. 5 Kimple, SE NE NW section 25-18-8w, Geneseo area, Rice County, had Siliceous lime at 3,162 feet, total depth 3,193 feet, was acidized, pumped 218 bbls. of oil in four hours and made potential of 800 bbls.

Skelly Oil Co. No. 6 Dittmers, NE SE SW section 28-19-10w, had Siliceous lime at 3,305 feet, was bottomed at 3,309 feet, acidized, pumped 204 bbls. of oil in eight hours, potential 599 bbls.

Carter Oil Co. No. 3 Risse, NW SW SW section 33-19-10w, Silica field, had Siliceous lime at 3,289 feet, total depth 3,295 feet, pumped 316 bbls. of oil in four hours, potential 1,897 bbls.

Shell Petroleum Corp. No. 3 Hathaway, NE SW NE section 33-19-10w, Siliceous lime 3,277 feet, total depth 3,284 feet, pumped 324 bbls. of oil in four hours, potential 1,890 bbls.

T. M. Deal Oil & Gas Co. No. 2 Gossman, SE SW SW section 4-21-7w, Hauschild-Saxman-Theede district, had Conglomerate at 3,355 feet and was dry and abandoned at 3,409 feet.

Cities Service Oil Co. No. 1 Gossman, SE cor. section 5-21-7w, had Conglomerate at 3,329 feet, total depth 3,363 feet, potential 555 bbls. of oil.

R. E. Day and others No. 1 Mansz, SW SE SE section 21-21-7w, an old well, was deepened from 2,115 feet to Siliceous lime at 3,820-38 feet, total depth, and was dry and abandoned.

Atlantic Refining Co. and others No. 4 Hughes A, NE SE SE section 6-21-7w, was an abandoned location.

Rice County completions of the preceding week: Stanolind Oil & Gas Co. No. 9 Mitchell, SE NW SW section 32-19-10w, total depth 3,306 feet, potential 487 bbls. of oil. Phillips Petroleum Co. and others No. 1 Hubenett, SW NE SW section 23-20-6w, 3,378 feet, potential 400 bbls. of oil. Ohio Oil Co. No. 3 Proffitt, SW NW SE section 18-20-9w, 3,353 feet, potential 496 bbls. of oil. Sage & Yankey No. 8 Gossman, NE NW NW section 9-21-7w, 3,370 feet, potential 620 bbls. of oil. Reserve Development Co. No. 8 Patton, SE NE NW section 16-21-7w, 3,430 feet, potential 596 bbls. of oil.

New work in Rice County: Gulf Oil Corp. No. 2 Gossman, SE SW NE section 8-21-7w, rigging up; Atlantic Refining Co. No. 1 Hopkins B, SW NE SW section 8-21-7w, building rig; same company's No. 2 Hopkins B, NE SW SW section 5-21-7w, building rig; El Dorado Refining Co. No. 2 Gossman, NW NE SW section 5-21-7w, set casing at 98 feet; Continental Oil Co. No. 1 Groth, SE SW section 32-20-7w, reaming below 132 feet; Obin-Long and others No. 2 Hubenett, NW NW SW section 23-20-6w, digging cellar; Western Kansas Oil & Refining Co. No. 1 Steinback, SE NE SE section 22-20-6w, location; Sinclair Prairie Oil Co. No. 3 Bolton, SW SE SW section 31-18-7w, location; Continental Oil Co. No. 3 Ainsworth A, SE SW NW section 30-18-7w, rig.

Ellis County

Cities Service Oil Co. No. 1 Johansen, NW NW NE section 22-11-17w, Bemis district, Ellis County, found Siliceous lime at 3,384 feet, total depth 3,491 feet, and made potential of 1,800 bbls. of oil.

Magnolia Petroleum Co. No. 2 Johansen, NW NW SE section 22-11-17w, had Siliceous lime at 3,407 feet, total depth 3,412 feet, pumped 220 bbls. of oil in two hours, potential 2,401 bbls.

Deep Rock Oil Corp. No. 8 Baumer, NW NW NE section 27-11-17w, Siliceous lime 3,473 feet, total depth 3,493 feet, acidized, pumped 408 bbls. of oil in four hours, potential 2,453 bbls.

L. H. Wentz No. 3 Bemis, NE SE NW section 28-11-17w, Siliceous lime 3,418 feet, total depth 3,428 feet, acidized, potential 2,734 bbls.

Wolf Creek Oil Co. No. 2 Bemis A, SE SE NW section 4-12-17w, east of Shutts, Siliceous 3,715 feet, total depth 3,720 feet, dry and abandoned.

J. A. Aylward and associates No. 2 Meis, SE SE NW section 6-12-17w, had Conglomerate at 3,638 feet, was bottomed at 3,825 feet and was dry and abandoned.

Phillips Petroleum Co. No. 3 Staab, SW SW NE section 11-12-18w, Siliceous lime 3,684 feet, total depth 3,690 feet, acidized four times, pumped 54 bbls. of oil with 1 per cent water in four hours, potential 135 bbls. of oil.

Other recent Ellis County completions: Lario Oil & Gas Co. No. 1 Romine, NW SW NW section 18-11-16w, total depth 3,317 feet, potential 1,685 bbls. Sinclair Prairie Oil Co. No. 1 Cress, NE SE NE section 2-11-17w, total depth 3,333 feet, potential 1,344 bbls. Deep Rock Oil Corp. No. 10 Baumer, SW NE NW section 27-11-17w, total depth 3,426 feet, potential 3,166 bbls. Same company's No. 13 Baumer, SE NE NE section 27-11-17w, total depth 3,501 feet, potential 2,971 bbls. L. H. Wentz No. 4 Bemis, SE SE NW section 28-11-17w, total depth 3,429 feet, potential 2,434 bbls. Amerada Petroleum Corp. No. 1-E Shutts, SE SW NE section 6-12-17w, abandoned at 3,923 feet. Lario Oil & Gas Co. No. 1 Roener, NE NW SW section 11-12-18w, total depth 3,689 feet, potential 1,199 bbls.

First reports of new activity in Ellis County: Shell Petroleum Corp. No. 1 Madden, NE NE SE section 29-11-17w, moving in; Magnolia Petroleum Co. No. 3 Johansen, SW SW NW section 22-11-17w, location; Cities Service Oil Co. No. 4 Johansen, NW NE NW section 22-11-17w, location; Republic National Co. No. 4 Romine, NW NE NW section 18-11-16w, location.

Barton County

Lario Oil & Gas Co. and Atlantic Refining Co. No. 1 Zahorsky B, NE SE NE section 23-20-11w, Peter pool, Barton County, had Siliceous lime at 3,260 feet, was bottomed at 3,270 feet, pumped 351 bbls. of oil in four hours and made potential of 2,110 bbls.

Magnolia Petroleum Co. No. 11 Roetzel, NW SW SE section 24-20-11w, Siliceous lime 3,243 feet, total depth 3,254 feet, pumped and flowed 441 bbls. of oil in four hours, potential 1,764 bbls.

Indian Territory Illuminating Oil Co. No. 2 Schrepel A, NE SE NE section 26-20-11w, Siliceous lime 3,275 feet, total depth 3,289 feet, acidized, swabbed 360 bbls. of oil in eight hours, potential 1,478 bbls.

Cities Service Oil Co. No. 2 Bitter, SW NW NW section 5-16-13w, Barton County extension of the Trapp field, had Siliceous lime at 3,302-13 feet, total depth, was acidized and made potential of 1,935 bbls. of oil.

Texas Co. No. 3 Hoffman, NW NE NW section 6-16-13w, Siliceous lime 3,337 feet, total depth 3,356 feet, pumped 315 bbls. of oil in four hours, potential 1,890 bbls.

Completions of the preceding week in Barton County: Continental Oil Co. No. 5 Ainsworth, NW SE NE section 33-16-13w, 3,415 feet, potential 1,198 bbls. of oil. Transwestern Oil Co. No. 3 Meyers, SE NE NE section 13-17-11w, 3,185 feet, potential 968 bbls. of oil. Texas Co. No. 3 Hoffman, NW NE NW section 6-16-13w, 3,356 feet, potential 1,890 bbls.

New activity in Barton County: Stanolind Oil & Gas Co. No. 3 Kowalsky, NE cor. section 11-20-11w, rig; T. C. Johnson No. 2 Bitter, SW SW NW section 8-16-13w, location; same operator's No. 1 Bitter, NW NW SW section 8-16-13w, cellar; Polk-Fortson No. 2 Meyer, SW NW SE section 16-16-12w, drilling below 3,300 feet.

Reno County

National Petroleum Corp. No. 9 Tucker, C W half W half NE section 19-24-4w, Burrton field, Reno County, had Chat at 3,323 feet, was bottomed at 3,381 feet, pumped 120 bbls. of oil in six hours, was acidized and made potential of 1,236 bbls.

Phillips Petroleum Co. No. 4 Astle Island, NW NE NE section 19-24-4w, had Chat at 3,327 feet, total depth 3,390 feet, plugged back to 3,365 feet, flowed and swabbed 100 bbls. of oil and 95 bbls. of water in 24 hours, was acidized and made potential of 126 bbls. of oil, with 72 bbls. of water.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 4 Hilger A, NW cor. section 16-26-4w, Hilger pool, had Viola lime at 4,027-31 feet, total depth, pumped 640 bbls. of oil in 16 hours and later made potential of 655 bbls.

One well was completed in Reno County the previous week. It was Sinclair Prairie Oil Co. No. 3 Showalter, C E half E half SE section 8-24-4w, was bottomed at 3,375 feet and made potential of 445 bbls. of oil.

Drillers Gas Co. No. 1 Showalter, NW cor. section 34-24-5w, was a location. Jones and others No. 1 Shepherd, NW cor. section 22-26-9w, was a rig.

Stafford County

Stanolind Oil & Gas Co. No. 7 Komarek, NE NE SE section 30-22-11w, Richardson pool, Stafford County, topped Siliceous lime at 3,545 feet, was bottomed at 3,482 feet, acidized, pumped 241 bbls. of oil in four hours, potential 1,349 bbls.

Skelly Oil Co. and others No. 1 Grunder, NW cor. section 22-25-14w, found Kansas City lime at 3,715 feet and was dry and abandoned at 3,960 feet, total depth.

W. P. Faulkner No. 1 Schulz, SE SE NE section 6-22-13w, wildcat, was an abandoned location.

Stanolind Oil & Gas Co. and associates No. 9 Heyen B, SE SW NE section 31-22-11w, was a rig.

McPherson County

Continental Oil Co. and others No. 5 Goering, NE NW SW section 29-21-1w, Graber pool, McPherson County, had Hunton lime at 3,252 feet, was bottomed at 3,297 feet, acidized and made potential of 708 bbls. of oil.

W. C. McBride, Inc., No. 3 Neufeldt, SE NE NW section 28-21-3w, Hunton lime 3,367 feet, was dry and abandoned at 3,392 feet, total depth.

A trio of wells were completed in McPherson County the previous week. Continental Oil Co. No. 8 Hetzke, C E half W half NE section 29-21-1w, 3,326 feet, potential 752 bbls. of oil. Same company's No. 3 Huxman, C E half E half NW section 29-21-1w, 3,275 feet, potential 572 bbls. of oil. The other completion was a wildcat failure.

Operations in McPherson County reported for the first time: Continental Oil Co. and others No. 4 Heizman, SE SW NW section 29-21-1w, cellar; Amer-

(Continued on Page 76)

West and North Texas

By L. E. BREDBERG

TWO NEW POOLS IN HOCKLEY DEVELOP PIPE LINE SURVEYS

FORT WORTH, Tex., Aug. 30.—Hockley, the first far northern county in the Permian Basin to obtain production, has definitely been given two more fields, one by Bohago & Bond and the other by the Denver Producing & Refining Co. These new producing spots are on a bee line from north to south, separated by six sections, and the Denver discovery is only about 6 miles northwest of the Wasson field in the northern part of Gaines County. Chances look good for a major field being proven from the Gaines field to the northern discovery of Bohago & Bond. This well, also the Denver well, is about 8½ miles from the county's first producer in the Bennett field in the southeastern corner of the county. The Bohago & Bond well is northwest of that field and the Denver well is southwest.

These discoveries, and a 2½-mile southeastern extension for the Hockley County pool, opened several months ago by the Texas Co. in the southwestern corner of the county, and just extended by the Stanolind Oil & Gas Co. make a trunk line for the northern county fields imperative, and the Humble Pipe Line Co. is surveying for such a line from the Means field in the northeastern part of Andrews County, which may tap two small areas in the central part of Gaines, thence extend to the Wasson field in the northwestern part of that county, thence to the new pool opened in Yoakum; or it may detour to the older Bennett pool in which four wells are now producing, a connecting line then being laid from this main line as offshoots to connect the two newly opened pools in the county.

The Hockley and Cochran pools are about 30 miles farther to the north but may also be tapped by this proposed line into the area. The Texas-New Mexico Pipe Line Co. is also expected to enter this northern producing sector because the Texas Co., an associate, opened the Hockley pool, and it and the other companies interested in this major trunk line, which now has its northern terminus in the Hobbs field in New Mexico, have leases in the four counties which are expected to prove productive in the future and will need outlets. The Humble Pipe Line Co. also has a major trunk line out of the Hobbs field and may lay a line from that field to connect the new fields, also.

This new producing sector for the Permian Basin will no doubt prove one of its greatest potential supplies, as the counties comprising it have many millions of acres yet untested, and without a doubt a number of new pools will be opened in them.

Dawson County appears as possibly containing a field of importance since E. L. Wilson and others No. 1 T. H. Scanlon Estate, in section 83, Block N, E.L.&R.R. Survey, in the northwest corner of the county and about 4 miles west of a small pumper which early in the year opened the county's first producing area, logged saturated lime at 4,945 feet and filled 500 feet with oil in an hour. When drilled to 4,965 feet, however, it showed some water, but this is not considered as detrimental, since the first discovery in the county made some water, which was later exhausted. The test will probably be acidized, perhaps plugging back a few feet to shut off water before the treatment is made.

Yoakum Discoveries

The south central discovery of Bohago & Bond on the J. L. West ranch, in section 606, Block D, John H. Gibson Survey, was treated with a 1,000-gallon and then a 3,000-gallon load of acid this week at a total depth of 5,255 feet, and responded by flowing 102 bbls. of oil on a 24-hour test through a three-quarter inch choke on tubing, amply displaying the fact that it was the opener of a new field for Yoakum County. It made 1,000,000 feet of gas with the oil. Gravity of the oil tested 31.6 degrees.

Six and a half miles due south of the above well, the Denver Producing & Refining Co.'s discovery, located in section 831, same block and survey, on the J. A. Whittenburg Estate, is shut down at 5,015 feet flowing around 15 bbls. of oil, acid water and sediment following a reacidizing with 3,000 gallons of acid. It is 6 miles northwest of the Wasson field, which many expect to be linked with this new discovery when tests are drilled on intervening acreage. To the west 4 miles, the Texas Co. is drilling a test on the Walker lands, which is nearing the pay found in the Denver test, and which will consequently be closely watched for the next few days.

Hockley Extension

The lone pool in the southwestern corner of Hockley County, opened several months ago by the Texas Co., has been extended about 2½ miles southeast by the Stanolind Oil & Gas Co. No. 1 Slaughter, in Labour 76, League 37, Zavalla County School land, logged the pay, saturated lime, at 4,940 feet and drilled 35 feet into it, filling 3,500 feet with oil when shut down to run tubing and acidize preparatory to testing.

This is the first test drilled in the area since the discovery was made, and its extension presages a pool of considerable importance.

Apparent Failure

Loffland Brothers No. 3 J. B. Tubb and others test, in section 9, Block B-27, P.S.L. Survey, Crane County, evidently is to prove a failure as only a thin section of Simpson was drilled after topping it at 5,790 feet, going into the Ellenberger at 5,802 feet and shutting down at 5,891 feet in lime. After several days bailing it showed only sulfur water, with no oil or gas. It ran considerably higher than the Gulf Oil Corp. No. 5 Waddell, 1½ miles to the northwest, which three weeks ago flowed at the rate of over 8,000 bbls. per day when completed in the Ellenberger topped at 5,956 feet.

Wilcox Oil & Gas Co. is making a location in the extreme northwestern corner of Sterling County. It is on the lands of the Kinnebrew Estate in section 101, Block 2, H.&T.C. Survey. Crockett, Andrews, Gaines, Scurry and Yoakum counties each received a wildcat location in the past week.

Avoca Field

The recently uncovered field 2½ miles east of Avoca in northeastern Jones County, received its second and third oil wells this week, the second proving the largest yet completed in the new Canyon lime field in which production is coming from the pay far below any previously found in the county. The Iron Mountain Oil Co., which opened the field, brought in its No. 1 Haterius, diagonal northeast offset to its discovery well. Located in the SW cor. NE section 196, B.B.B.&C. Survey, it topped the pay at 3,240 feet and was shut down only 2 feet in the pay flowing at the rate of 3,132 bbls. per day. It was killed with mud and water to allow running and cementing 5-inch casing.

The third well, E. L. Wilson No. 1 Carl Olander, east offset to the discovery, in the same section, 196, was treated with 4,000 gallons of acid, and flowed 85 bbls. the first hour, filling two 500-bbl. steel storage tanks in 7 hours and 40 minutes. It ran 35 feet lower structurally than the discovery, topping the pay at 3,276 feet and completing 8 feet in the lime.

Fisher Wildcat

Bond & Harrison of Dallas have let contract to Mitchell & Sullivan of Fort Worth for a 3,600-foot wildcat test on the Bertram lands south of Sylvester in the southeastern part of Fisher County. Location is on the James & Leggett Subdivision 43, Bastrop County School lands.

The outpost test of Jim Anderson and others on the Colwell lands, in section 196, Block 2, H.&T.C. Survey, on the northwest outskirts of Rotan and about 2½ miles west of the recently opened Rotan field, has missed production in the regular 3,500-foot pay found in the pool and is now drilling deeper, the operators expecting to carry it to 4,100 feet. It is apparently a defining test to the west of the new field in which there are now two producers.

Extension in Ector

The Harper field in central Ector County was extended 2 miles northwest when Carter-Naylor No. 1 Parker, located in section 15, Block 42, Township 2s, T.&P. Survey, flowed 355 bbls. of oil the first 13 hours after acidizing with a three-stage treatment, totaling 5,500 gallons. The well topped the lime pay at 4,080 feet and shut down at 4,260 feet to complete.

WEST CENTRAL TEXAS

The Humble Oil & Refining Co. has abandoned the fourth test to be drilled on the De LaFosse lands in the eastern part of Shackelford County in search of production in the Ellenberger lime, from which production was obtained in the first test drilled on the ranch by Pitzer and West and Humble 1½ years ago. That test failed to make a producer because of junked pipe in the hole. The fourth test was drilled to 4,434 feet, where a hole full of sulfur water was struck.

Roeser & Pendleton, Inc., have drilled No. 38 Conway-Dawson, located in section 202, E.T.R.R. Survey, in the Bluff Creek pool in western Shackelford County to 3,410 feet without encountering any showing of oil or gas. It is believed this test is seeking the Canyon pay found about 10 miles northwest in the Avoca field in Jones County.

Desdemona Extended

The old Desdemona field in the northwestern part of Erath County, has been extended about 1 mile to the southeast by the Hickey and others No. 1 W. M. Martin, in the D. J. O. Miller Survey. It topped the pay at 2,853 feet and was shut in for storage after drilling to 2,870 feet. The oil tested 42 degrees in gravity. Location has been made about midway between this outpost and the field for another test.

Comanche Test

W. J. Dobbs of Dallas has assembled a block of some 3,000 acres about 7 miles northeast of Sipe Springs in Comanche County, and will drill a Caddo lime, or 3,000-foot test. Location is on the V. B. Hodges 170-acre tract in the northeast corner of section 11, Block 2, H.&T.C. Survey. Drilling machinery has been moved in and spudding is scheduled before August 31.

This test is near a test drilled by Frank Kirk several years ago and before acid was used in lime wells. The Kirk test was reported to have made some oil from gray lime at around 2,750-2,800 feet, the hole having been junked after the casing was shot. Two major companies have geologized the area.

PANHANDLE COMPLETIONS

Carson County

Magnolia Petroleum Co. No. 28 fee, 2,950-3,002 feet, shot, 113 bbls. on pump.

Gray County

Amagray Oil Co. No. 2-B Chapman, 2,747-2,872 feet, shot, 189 bbls. on pump. Cities Service Oil Co. No. 5-B Hughey, 3,175-3,285 feet, shot, 628 bbls. on pump; No. 5 Jackson, 3,205-3,319 feet, shot, 301 bbls. on pump. Sinclair Prairie Oil Co. No. 3 Carey, 3,206-3,305 feet, shot, 248 bbls. on pump.

Hutchinson County

Crosbie, Inc. No. 19 Pitts, 2,870-3,054 feet, shot, 854

(Continued on Page 80)

East and East Central Texas

By
L. E. BREDBERG

SOUTH ANDERSON COUNTY TEST IS IN WOODBINE SAND

DALLAS, Tex., Aug. 30.—The southern Anderson County test of the C. & G. Oil Co., which has been closely watched for two weeks, topped the Woodbine sand at 5,981 feet and at last report was shut down at 6,004 feet, in sand. This test is on the F. A. Newsome farm, T. C. Lovely Survey, 4½ miles northwest of the small high-gravity Woodbine sand producing well of Placid Oil Co. in northern Houston County, and has been checking higher structurally than that well in the Percilla area, which has made it more important from a potential producing standpoint.

The Trinity test of the Tide Water Associated Oil Co., Seaboard Oil Corp. and Humble Oil & Refining Co. on their Opelika structure in the northeastern part of Henderson County, on the McElreath & Suggett lands, in the J. P. Wyche Survey, is coring below 8,515 feet looking for the Travis Peak, after drilling through the Lower Glen Rose formation.

This is the second Trinity test of the three operators on the Opelika structure, their first test producing between 8 and 10 bbls. per day from the Glen Rose at a total depth of 7,195 feet, through stuck drill stem and three holes in the bit. The drill stem was stuck 30 feet above bottom of the hole when the crew tried to pull it after high gas pressure and oil was struck several months ago. It could not be pulled from the hole, consequently was cemented in and used for a production string and the second test started to the southwest, which has so far proven a failure and made the first test appear as a "freak" or crevice well. Title troubles have entered to further complicate matters for the operators.

Woodbine Topped

The southern Red River wildcat of Cosby, Inc., and others on the Hocker and Hughes lands, about 7½ miles northeast of the Talco field in northwestern Titus County, topped the Woodbine sand at 2,853 feet, and is drilling ahead. Those interested in the well and who have correlated it with the nearest tests report it running 150 feet higher than the test to the north, and 400 feet higher than the Joiner dry hole about 5 miles to the south. It is seeking production from the Paluxy sand. The test was recently taken over by Cosby, Inc., of Fort Worth to carry it down to the Paluxy after it stood shut down for many months. Those interested in the test and area will watch it closely for results, and it will make one of the most interesting tests in that part of the district.

Henderson's second Trinity test, 10 miles south of Opelika and near the town of LaRue, was drilling ahead after the first string of casing had been set at 1,834 feet. The test was below 2,000 feet. It is being drilled by E. B. LaRue, American Liberty Oil Co. and others on Block 11 of the Phillip Jackson Survey. The test is scheduled to go 7,500 feet to test formations on the flank of the Shell salt dome structure where several failures have been drilled.

In the Cayuga area Adams Brothers expected to spud during the week-end their new Woodbine test in the north end of the field, location being on a 39.4-acre tract owned by Miss Margaret Watkins of Dallas. It will be a west offset to the Sun Co. No. 2 producer on the Royall R. Watkins tract on the John F. Hollien Survey, most northern production in the field.

Stewart Oil Co. and O. D. Alsabrook No. 1 Nathan Young, S. Henry Hitchcock Survey, in Southwest Fannin County, southwest of Randolph, set surface casing Friday at 100 feet and will begin drilling this week on 3,700-foot contract.

Wildcats

Two miles southeast of Crockett in Houston County, Ridgeway & Jackson are moving in materials for a test on the H. F. Moore farm in the H. Master Survey. In Navarro County, Mrs. Jane Robinson has rigged up for a wildcat Woodbine test on the Fortson Brothers lands in the Eli Smith Survey. This location is 5 miles northeast of Corsicana, and about 2 miles northeast of the nearest old shallow wells which have been producing for many years.

The Nivia Oil Co. No. 1 Citizens National Bank test, located in the M. D. Carmel Survey, 2½ miles southeast of Henderson in Rusk County, is now shut down at 6,765 feet but is scheduled to be carried to 8,000 feet, or about 235 feet beyond the former contract depth. This is expected to carry the hole to the Travis Peak of the Lower Trinity.

Only one wildcat was completed in the district in the past week, and it proved a failure. This test was the Texas Trading Co. No. 1 Southern Pine Lumber Co., located in the D. Burton Survey, 12 miles north of Clarksville. It was given up as dry at a total depth of 2,385 feet, with an elevation of 326 feet.

EAST TEXAS COMPLETIONS

Gregg County

Atlantic Refining Co. No. 17 Wilson, 3,596-3,750 feet, 92 bbls. per hour. Atlantic and Sun No. 11-B Barnswell, 3,450-3,510 feet, 85 bbls. per hour; No. 82 Hays, 3,486-3,625 feet, 80 bbls. per hour. Cox & Hamon No. 11 fee, 3,473-3,511 feet, 36 bbls. in 30 minutes. L. S. Flannery No. 4 York, 3,512-15 feet, 30 bbls. in 30 minutes. General Crude Oil Co. No. 15 Barnswell, 3,472-79 feet, 145 bbls. per hour. Hester and Graham No. 6 Branson, 3,584-94 feet, 31 bbls. in 24 hours on pump. Humble Oil & Refining Co. No. 28 Harris, 3,489-3,527 feet, 45 bbls. per hour; No. 29 Harris, 3,516-55 feet, 45 bbls. per hour. L. G. & S. Oil Co. No. 2-C McQueen, 3,552-64 feet, 51 bbls. per hour. Joe Long Drilling Co. No. 24-A Owens, 3,637-50 feet, 70 bbls. per hour. Magnolia Petroleum Co. No. 7 Tuttle, 3,606-18 feet, 80 bbls. per hour. Petroleum Corp. of Venezuela No. 6 Tuttle, 3,508-35 feet, 75 bbls. per hour. Selby Oil & Gas Co. and Lewis No. 22-A Snavely heirs, 3,568-75 feet, 29 bbls. in 30 minutes.

Shell Petroleum Corp. No. 19 Fishburn, 3,490-3,530 feet, 30 bbls. per hour. H. R. Smith No. 13 Banknight, 3,592-3,620 feet, 30 bbls. in 20 minutes. Stanolind Oil & Gas Co. No. 57-B McKinley, 3,629-56 feet, 36 bbls. per hour; No. 4 Skipper-Garner, 3,517-25 feet, 45 bbls. per hour. Sun and Atlantic No. 14 Thomas, 3,471-3,531 feet, 20 bbls. in 25 minutes. Tide Water Oil Corp. No. 18 Moore, 3,520-47 feet, 10 bbls. in 10 minutes. United East & West Oil Co. No. 16 Walker, 3,605-06 feet, 30 bbls. in 30 minutes. Arcadia Refining Co. No. 9 Samples, 3,771-72 feet, 25 bbls. in 30 minutes. Canadian Production Co. No. 7 Hilburn, 3,670-80 feet, 34 bbls. in 30 minutes. Cities Service Co. No. 20 Walker, 3,659-88 feet, 18 bbls. in 15 minutes. Dearin and others No. 2 Wallace, 3,575-97 feet, 20 bbls. in 30 minutes. Fair & Thompson No. 8-A Carr, 3,468-92 feet, 110 bbls. per hour. S. S. Laird No. 3 Muckleroy, 3,555-85 feet, 20 bbls. in 30 minutes. Producers Investment Corp. No. 7 Butts, 3,542-80 feet, 72 bbls. in two hours. Hamil & Smith No. 1-A Knowles, 3,528-38 feet, 20 bbls. per hour. J. R. Sharpe No. 1-B Morton-Dickson, 3,524-32 feet, 20 bbls. per hour. L. L. Sugar No. 3 Griffin, 3,528-50 feet, 60 bbls. per hour. Sun Oil Co. No. 26 Morton, 3,499-3,507 feet, 66 bbls. per hour. H. H. Terte No. 4 Benson, 3,603-05 feet, 60 bbls. per hour. Tide Water Associated No. 18 Blackman, 3,636-40 feet, 4 bbls. in five minutes; No. 19 Strong, 3,628-37 feet, 5 bbls. in six minutes.

Rusk County

Everets Drilling Co. No. 4-B Crews, 3,828-30 feet, 40 bbls. per hour. Houston Oil Co. No. 7-B Bean, 3,568-3,628 feet, 20 bbls. in 25 minutes. Humble Oil & Refining Co. No. 179 Crim, 3,595-97 feet, 80 bbls. per hour; No. 41-A Laird, 3,632-90 feet, 60 bbls. per hour. Arkansas Fuel Oil Co. No. 17 Wheelis, 3,655-80 feet, 14 bbls. in 15 minutes. Atlantic Refining Co. No. 8-D Young, 3,630-3,770 feet, 50 bbls. per hour. Blackwell Oil & Gas Co. No. 11-A Stone, 3,665-97 feet, 40 bbls. in 30 minutes. Davis & Hart No. 3-C Perry, 3,628-45 feet, 70 bbls. in 24 hours on pump. G. B. R. Oil Co. No. 15 Harmon, 3,770 feet, 51 bbls. per hour. Gulf Oil Corp. No. 9 Johnson, 3,787-88 feet, 5 bbls. per hour through one-quarter inch choke. Humble Oil & Refining Co. No. 64-A Kangerga, 3,660-3,730 feet, 60 bbls. per hour; No. 65-A Kangerga, 3,654-66 feet, 50 bbls. per hour. Hunt Oil Co. No. 32-C Fair, 3,607-19 feet, 23 bbls. in 12 minutes; No. 20 Young, 3,652-68 feet, 23 bbls. in 14 minutes. McCulloch Oil Co. No. 2 Thompson, 3,770-78 feet, 85 bbls. in two hours. Octo Oil Co. No. 4-A Cox, 3,656-93 feet, 60 bbls. in two hours. Ohio Oil Co. No. 83 Cross, 3,597-3,626 feet, 40 bbls. per hour. Overton Refining Co. No. 3 Lee, 3,647-52 feet, 60 bbls. in three hours on pump. Tide Water Associated No. 13 Irion, 3,662-65 feet, 15 bbls. in 15 minutes. Ward Oil Co. No. 15 Finney, 3,686-3,729 feet, 55 bbls. per hour.

Cherokee County

Texas-Canadian Oil Co. No. 8 Keel, 3,696-97 feet, 25 bbls. in 30 minutes.

Smith County

Genecov & Roosth No. 6 McDavid, 3,745-57 feet, 107 bbls. in three hours; No. 7 McDavid, 3,741-42 feet, 163 bbls. in four hours, by heads. Hunt Oil Co. No. 29-A Fair, 3,675-3,684 feet, 20 bbls. in four hours. Magnolia Petroleum Co. No. 40 Fulgham-Wright, 3,710-12 feet, 22 bbls. in 15 minutes. Sun Oil Co. No. 3 Seale, 3,732-33 feet, 20 bbls. per hour.

Upshur County

C. C. Glasscock No. 6 Webb, 3,686-96 feet, 35 bbls. in 15 minutes. Humble Oil & Refining Co. No. 11 Watkins, 3,679-3,723 feet, 70 bbls. per hour. P. H. Pewitt No. 4 Kirk, 3,749-50 feet, 35 bbls. per hour. Rudco Oil & Gas Co. No. 5 Nicholson, 3,656-58 feet, 30 bbls. in 70 minutes.

EAST CENTRAL TEXAS COMPLETIONS

Franklin County

Cliff Camp and others No. 1 O. E. Bolin, 4,319 feet, 563 bbls. on pump.

Henderson County

F. M. Allison No. 4 Wathen, 4,080-92 feet, 176 bbls. through one-eighth inch choke.

Red River County

Texas Trading Co. No. 1 Southern Pine Lumber Co., dry and abandoned 2,385 feet, elevation 407 feet, 12 miles north of Clarksville.

Titus County

Buchanan & McGrede No. 1 Mrs. Cal Russell, dry and abandoned 2,200 feet, elevation 326 feet. G. M. & W. Oil Co. No. 1-25 Talco, 4,165-4,320 feet, 344 bbls. on pump. Hinton and others No. 11 Wilson, 4,190-4,277 feet, 449 bbls. on pump. Housh and Thompson No. 5 Moore Grocery, 4,205-4,300 feet, 476 bbls. on pump. Humble Oil & Refining Co. No. 1 Batson, 4,207-4,336 feet, 415 bbls. on pump; No. 4 Pat Davis, 4,216-4,335 feet, 229 bbls. on pump; No. 3 Milligan, 4,195-4,330 feet, 104 bbls. on pump. Magnolia Petroleum Co. No. 5 Belcher, 4,154-4,315 feet, 405 bbls. on pump. O'Neal and others No. 1-B Edwards, 4,270-4,330 feet, 243 bbls. on pump.

Central West

By STAFF CORRESPONDENT

CLAY, RICHLAND AND MARION FIELDS ADD TO PRODUCTION

MATTOON, Ill., Aug. 30.—New wells in Clay, Richland and Marion counties in the past week added to the production being drawn from the new fields of the Central Illinois Coal Basin. A 2,028-bbl. well in Clay and a 1,043-bbl. well in Richland, were the best of the week's crop of new producers. Two dry holes in Marion County served as wet blankets to operations in their respective neighborhoods. A small well was completed at a shallow depth in Edgar County and another disappointing test appears fated for abandonment in Wayne County. The latter is Pure Oil Co. No. 1 Mullinax in section 27-1n-7e, total depth 3,144 feet. The week's record of completions follow:

Clay County

Four wells were completed in Clay County, the best having been Wiser Oil Co. No. 3 D. Smith, NE SE NE section 28-3n-8e, which started at 2,028 bbls. per day from pay at 2,960-72½ feet. It produced through 2½-inch tubing.

Pure Oil Co. No. 3 O. Poppe, NE NW SW section 27-3n-8e, is a 135-bbl. pumper from pay at 2,951-54 feet.

Pure Oil Co. No. 2 B. Travis, NE SW NE section 33-3n-8e, made 754 bbls. initially, flowing through casing, from pay at 2,960-67 feet.

Pure Oil Co. No. 2 E. Weiler, SW SE SE section 33-2n-8e, was good for 974 bbls. the first day, flowing through casing from pay at 2,965-69 feet, total depth 3,016 feet.

Indian Refining Co. at Lawrenceville, Ill., is taking the above Pure Oil Co. oil and the Standard of Ohio at Latonia, Ky., is taking the oil from the above Wiser Oil Co. completion.

Pure Oil Co. No. 1 E. Walters, SW SW SW section 5-3n-9e, in Richland County, had St. Genevieve lime at 2,906 feet and pay in 2,953½-59½ feet, total depth 2,977 feet. The well flowed 1,043 bbls. the first day, 960 bbls. the second, 889 bbls. the third and 853 bbls. the fourth day through casing. Indian Refining Co. takes the oil.

In Edgar County, Hassett and others completed a 5-bbl. pumper at 449-502 feet in No. 1 Stark, SE SE NE section 18-12n-13w. This is north of the old Marshall field on the eastern side of the state.

Four wells were completed in Marion County, including two dry holes and a drilling well abandoned. The dry holes were Bryant & Cassidy No. 1 Jolliff, NE NW SE section 28-4n-1e, which had no Benoist sand and was drilled to 1,655 feet. It had St. Genevieve lime top at 1,602 feet. The hole was shot with 120 quarts at 1,419-56 feet and swabbed salt water. It was abandoned. Section 28 contains the bulk of the good wells in the Patoka field. Sunflower Oil & Gas Co. No. 1 Murfin, NE cor. NW NW NE section 33-4n-1e, was completed as a failure at 1,449 feet. No sands were reported. Hempen & Brugess abandoned the location for No. 1 Miller, C NW NE section 34-4n-1e, and their No. 1 Prine, SW cor. NE SE SE section 33-4n-1e, was abandoned at 1,047 feet.

Adams Oil & Gas Co. No. 2 Majonnier, SE cor. NW SW section 28-4n-1e, is a 55-bbl. pumper completed in sand at 1,434-50 feet.

J. W. Carter and others No. 1 Ballance and others, NW NW SE section 28-4n-1e, made 55 bbls. initially on the pump from Benoist sand at 1,436-50 feet.

Wayne County

Another disappointing well in Wayne County is Pure Oil Co. No. 1 Mullinax, NE SE SE section 27-1n-7e. It is at a total depth of 3,144 feet with nothing showing. It cored at 2,992-3,037 feet and 3,082-3,144 feet. It was bailed and swabbed but no oil was apparent. The test has been temporarily abandoned.

New Locations

In last week's report 25 new locations were named. This week the number drops to 12, one of which is in Vigo County, Indiana. The list is as follows: In Clay County, Wiser Oil Co. No. 7 D. Smith, NE NE NE section 28-3n-8e, is a derrick; No. 8 Smith, NW SW NE section 28, a location. Pure Oil Co. No. 9 Poppe, NW NW NW section 27-3n-8e, location.

In Marion County, Adams Oil & Gas Co. No. 4-A Wasem, 1,150 feet from north and 1,100 feet from west lines of NW quarter of section 28-4n-1e, was drilling at 480 feet; Frank Frederick No. 1 Ballance and others, Out lot No. 3, C. F. Jones addition, SE NE SW section 28-4n-1e, drilling at 520 feet; Reynolds and others No. I Eagar, Block 7, C. F. Jones addition, NW SE SW section 28-4n-1e, drilling at 300 feet; Thomas H. Roberts and others No. 1 George Purcell, Block 3, Ness addition, SW NW SE section 28-4n-1e, rigging up rotary; J. S. Staley No. 1 Belcher, Block 3 Railroad Addition, section 28-4n-1e, set 10-inch pipe at 61 feet, and making repairs.

In Richland County, Southern Illinois Petroleum Corp. has derrick up for No. 1 H. Allard, NW NW NW section 16-3n-9e, on a Noble town lot.

In Effingham County, Faurot, Mitchell & Hazlett have cellar and pits dug for a test in NE cor. NW NE section 5-7n-6e.

In Vigo County, Indiana, Carter Oil Co. made a location for No. 1 Roy, C N half SE NE section 16-10n-10w.

Progress in Drilling

In Clay County Elmer Hupp and others have spudded No. 1 Bemis, SE SE NW section 14-3n-8e. Pure Oil Co. was drilling at 2,100 feet in No. 1 J. H. Smith, NE NE SW section 33-3n-8e. Pure Oil Co. No. 6 O. Poppe, NW NW SE section 28-3n-8e, was drilling at 2,190 feet; Pure Oil Co. No. 1-A Moseley, SW SW NE section 28-3n-8e, derrick up; Pure Oil Co. No. 4 O. Poppe, SW SW NW section 27-3n-8e, drilling at 2,618 feet after penetrating Cypress at 2,602-18 feet. Same company's No. 5 O. Poppe, NW SW NW section 27-3n-8e, drilling at 1,954 feet; same company's No. 7 O. Poppe, SW NW NW section 27-3n-8e, drilling at 1,354 feet.

Duncan Oil Co. No. 1 Carroll, NE NE SE section 8-2n-8e, was coring at 3,048 feet. It had St. Genevieve lime at 2,953 feet and saturated Oolitic lime at 2,995-98½ feet. J. D. Davis was coring at 3,168 feet in No. 1 A. E. Volbert, SW NW SE SW section 12-2n-6e. Wicklund & Deuel No. 1 Sanford, SE SE NW section 29-3n-8e, drilled to 3,160 feet and plugged back to 3,146 feet and acidized with 1,000 gallons. When swabbed the well produced salt water.

Pure Oil Co. No. 2 Bechtel, SW SW NE section 33-3n-8e, set whipstock at 2,740 feet and was drilling at 2,793 feet in a new hole. Wiser Oil Co. No. 5 D. Smith, SE NE NE section 28-3n-8e, was drilling at 2,865 feet. It had Cypress sand at 2,622-37 feet. Pure Oil Co. had derrick up for No. 8 O. Poppe, SW NE SE section 28-3n-8e.

In Clark County, National Consumers Oil Co. appears to have a disappointing test. No. 1 Jackson, NW NE NW section 21-11n-12w, is shut down for orders from headquarters at a total depth of 2,428 feet.

In Bond County, Whitehead & Morey No. 1 Kunz, in section 11-6n-5w, was drilling at 465 feet; and their No. 1 Polland, NW SE SW section 26-6n-2w, was drilling at 1,700 feet, topping Benoist sand at 1,152 feet, Mississippi lime at 1,200 feet, and McCloskey sand at 1,220 feet.

In Richland County, Ohio Oil Co. No. 2 Arbuthnot, NE NW NW section 8-3n-9e, had McCloskey sand at 2,948-52 feet, with saturation. The crew cemented 7¼-inch pipe at 2,930 feet and was waiting for cement to set. Total depth is 2,968 feet. R. H. Neely and others No. 1 Baughman, SE SE NE section 22-3n-10e, was at 2,914 feet, with the tools stuck. Pure Oil Co. No. 1 J. C. Eagleson, NE NE NE section 7-3n-9e, topped St. Genevieve lime at 2,915 feet. The formation was swabbed, with no oil showing, and was then acidized with 1,000 gallons and an 18-bbl. oil load.

Ohio Oil Co. No. 3 Arbuthnot, NW NE NW section

Lieutenant-Governor John Stelle of Illinois, (facing the camera), and R. W. McIlvain, Jr., manager of the Pure Oil Co.'s Illinois operations, at one of the company's wells in the Noble pool in Richland County. The picture was taken at the recent Olney, Ill., celebration of its advent as an oil center.

8-3n-9e, was drilling at 1,500 feet; Pure Oil Co. No. 1 Noe, SE SE SE section 6-3n-9e, drilling at 2,340 feet; Pure No. 3 E. Walters, SW SE SW section 5-3n-9e, drilling at 1,046 feet; No. 2 Walters, SE SW SW section 5-3n-9e, drilling at 2,216 feet; Pure No. 1 J. T. Palmer, SW SE SW section 5-3n-9e, drilling at 1,000 feet.

In Jefferson County, Dee & Carter No. 1 Harvey Hamilton, NE cor. SW NW section 20-4s-3e, had 2,600 feet of oil in the hole at a total depth of 2,914½ feet, and was shut down.

In Coles County, Gregory & Mechling No. 1 Foltz, NW SW NE section 31-14n-14w, had a small showing of oil at 1,075-97 feet, and casing was being reamed.

In Jasper County, Diamond Half Oil Co. was drilling at 999 feet in a new hole at No. 1 Islay, C NW NW section 24-8n-8e.

In Vigo County, Indiana, Carter Oil Co. No. 1 Paddock, C S half SE NE section 16-10n-10w, drilled to 2,190 feet, was plugged back to 2,140 feet and flowed 85 bbls. the first day and 295 bbls. in four days. Preparations were being made to put it on the pump. Same company's No. 1 Mitchell, C S half SW NW section 15-10n-10w, had 8⅝-inch casing set at 131 feet.

Willis and others were drilling at 1,050 feet in No. 1 Varil, SE SW NE section 6-1n-3w, Clinton County.

In White County, Johnston & Spears No. 1 Poorman, NE NW NW section 5-3s-8e (corrected location), set 10-inch pipe at 215 feet.

In Wayne County, A. Bruner No. 1 Kuyoth, NW cor. section 30-2n-8e, was drilling at 960 feet; Fitzpatrick & Myer No. 1 Shannon, SW NW SE section 26-2n-8e, spudded; J. D. Davis No. 1 Nugen & Rose, section 21-2n-5e, shut down at 300 feet while making repairs.

In Washington County, Milliken and others No. 1 Lesseman, NW NW NW section 36-1n-2w, was drilling at 1,160 feet.

In Marion County, Carter Oil Co. No. 1 Medzger, C W half NW SE section 4-4n-3e, was drilling at 1,751 feet.

In Fayette County, John Farrelly No. 1 Lilly, SE cor. SW SE section 16-8n-3e, was at 300 feet and the crew was straightening the hole.

In Edwards County, Leach Brothers No. 1 A. D. Lee, SW NE SE section 11-1s-10e, was drilling at 1,051 feet.

OHIO

FINDLAY, Ohio, Aug. 30.—Normal production activities in Ohio continued during the past week with a total of 28 completions, six of which were dry holes. In northern Ohio's Clinton gas field Ohio Fuel Gas Co. No. 1 J. W. Kline, section 22, Jackson Township, Ashland County, was completed as a commercial gas well with an open flow of 456,000 feet. The producing sand was encountered at from 2,888-95 feet; total depth of the hole is 2,933 feet.

In Medina County, Robinson and others No. 6 B. J. Vandermark, section 27, Harrisville Township, was completed as an 8-bbl. oil well in the Berea sand at from 388 to 430 feet, total depth 467 feet.

In Stark County, Lyons and others No. 1 Joe Burger, in section 21, Perry Township, was completed as a commercial gas well in the Clinton sand at from 4,483 to 4,507 feet. The well had a natural open flow of 431,000 feet with a rock pressure of 1,305 pounds.

In Lorain County, the Kemrow Companies No. 2 Carl E. Neubert, section 62, Columbia Township, was plugged and abandoned as a dry hole in the Clinton sand which was found at from 2,645 to 2,653 feet. Second sand was encountered at from 2,679-89 feet. The total depth of the hole was 2,706 feet.

In Licking County, Hazlett and others No. 1 J. Kraeger, section 18, Hopewell Township, completed a Clinton well at from 3,026 to 3,074 feet. The well made 37 bbls. of oil the first 24 hours after the shot. In Franklin Township of the same county, Wehrle Gas Co. No. 2 Jesse M. Lake, section 10, was completed as a commercial gas well in the Clinton at from 2,835 to 2,873 feet. The well gauged 200,000 feet naturally. In Hopewell Township, W. A. Larrick No. 1 J. Iden in section 12 was abandoned as a dry hole in the Clinton at 3,079-27 feet. In the fourth quarter of Mary Ann Township, Settles Oil Co. No. 1 Phil F. Shannon was completed as an 8-bbl. oil well in the Berea sand at from 747 to 759 feet.

In Muskingum County E. H. Everett Co. No. 6 Ella Gill, second quarter of Licking Township, got Clinton sand at from 2,909 to 2,962 feet. The well made 65 bbls. of oil the first 24 hours after it was shot. In section 15, Salem Township, Wittmer Co. No. 1 William J. Dennison was plugged and abandoned as a dry hole in the Clinton formation. The first Clinton was encountered at 4,015-50 feet. The second Clinton sand was at 4,118-22 feet.

In Belmont County, Barnsville Development Co. No. 1 Belmont County Childrens Home, in section 10, Warren Township, gauged 75,000 feet of gas in the Injun sand at 1,248-55 feet. In Monroe County, Hines Brothers and others No. 1 Nancy M. Smith, section 2, of Franklin Township, made 33,000 feet of gas naturally in the Berea sand at 854-864 feet. The well was shot and made 94,000 feet after the shot. In Noble County, E. R. Dutton and others No. 1 Charles G. Watson, section 23, Seneca Township, was tubed with an open flow of 22,000 feet of gas in the Berea at 1,461-70 feet. The total depth of the hole was 1,476 feet. In section 19, Wayne Township, Gold Crown Oil & Gas Co. No. 1 John T. Christy gauged 786,000 feet of gas from the second Cow Run sand at 623-640 feet. The well had a rock pressure of 162 pounds.

In Washington County, Metcalf and others No. 1 Grover Henderson, in section 22, Liberty Township, gauged 10,000 feet of gas and made 5 bbls. of oil in the first 24 hours after shot. The Keener sand was encountered at 1,185-93 feet. In section 28, Independence Township, J. L. Herlan No. 2 Hulda Hopple, gauged 37,000 feet of sand in the Squaw sand at from 1,680-85 feet. In section 4, Liberty Township, C. E. Smith's No. 3 George W. Adams gauged 70,000 feet of gas with some pay in the Germantown sand at 833-920 feet and a little more in the Squaw sand at 1,305-45 feet.

In Meigs County, Fugate and others No. 2 S. Ethel Metcalf, section 19, Rutland Township, gauged 125,000 feet of gas in the Maxton at 685-895 feet. In section 27, Salisbury Township, Mayer and others No. 4 Pearl Hysell gauged 400,000 feet of gas naturally from Salt sand at 610-653 feet. The rock pressure of the well was 260 pounds. In section 21 of Lebanon Township, Meigs Development Co. No. 2 Charles M. Smith shut in at 95,000 feet of gas in the first Berea at 1,897-1,903 feet. Total depth of the hole was 1,925 feet and the rock pressure of the hole was 720 pounds. H. M. Nelson abandoned a hole full of water from the Maxton sand at 800-825 feet on the Asbury Bryant farm in section 1, Rutland Township. In Athens County, Carpenter & Glazier No. 16 Lena Bean, section 18 of Canaan Township made 2 bbls. of oil naturally from the first Cow Run sand at from 109 to 140 feet. A shot did not increase the production. The same company's No. 20 J. J. Smith in section 13 of Ames Township was abandoned as a dry hole with no sand found at the horizon of the First Cow Run. In Vinton County Kelch Brothers No. 3 E. C. Worthman, section 18 Clinton Township, gauged 37,000 feet in the Hamden sand at 777-97 feet. Harrietsville Drilling Co. No. 3 R. C. VanFossen, section 22, Elk Township, Noble County, was abandoned as a dry hole in the Lime sand at from 910-1,005 feet.

EASTERN KENTUCKY

ASHLAND, Ky., Aug. 30.—Two oil-well completions and one dry hole are included in the weekly report from the eastern part of the state.

One of the oil-well completions, that of C. G. Mays on the Medley S. Cole land in the Big Sinking district of Lee County, shows prospects of being a fine well. It is being pumped before shooting and the operator is confident that it will make 50 bbls. daily after the shot.

The other oil completion and the dry hole were also in Lee County. Floyd Fitch drilled the dry hole in No. 1 on the Levi Ross land, while the Evans Oil Co. completed No. 14 on the Andrew Combs farm. This well has a daily production of 3 bbls.

Reports from this section of the state were light this week with several field men reporting no operations in their districts, while some drilling operations are at a standstill.

Two other wells in Lee County are in oil sand and completion is expected at any time. These are C. E. Townsend No. 7 on the Andrew Combs farm and McCowan & Wising No. 4 on the same property.

Magoffin County

In Magoffin County Bed Rock Petroleum Co. is drilling below 140 feet in No. 10 on W. M. Prater farm on Prater Fork of Mash Fork. Reports from Whitesburg district No. 29 and Falcon district No. 25 state that no drilling operations are under way at the present time.

Knott County

In Knott County the Kentucky-West Virginia Gas Co. has reached the 1,205-foot level in No. 553 on the Isom Gibson farm, with drilling continuing in sand, and is down 330 feet in No. 5,528 on the Nancy Johnson land on Caney Fork. The same company is in sand at the 1,211-foot level in No. 554, Lark Slone land on Jones Fork.

The Inland Gas Corporation is below 2,138 feet in No. 1 Ritter Short on Wiley Fork of Troublesome Creek. The Kentucky-West Virginia Gas Co. is drilling in sand at 650 feet in No. 556, John Lane land.

The Inland Gas Corp. is in slate below 400 feet in No. 2 E. A. Hammonds on Right Fork on Troublesome Creek, and is down 19 feet in No. 3 R. C. Kilgore in the same vicinity.

Floyd County

Inland Gas Corp. is rigging up No. 1 Ollie M. Glenn heirs on Levisa Fork in Floyd County. Kentucky-West Virginia Gas Co. has reached the 976-foot mark in slate and shells in No. 55 on the Grover Jervis farm, on Home Branch of Buffalo Creek.

Martin County

The Kentucky-West Virginia Gas Co. is down 575 feet in slate in No. 225 on the C. W. Preece land, on Coldwater Fork in Martin County. The same firm is idle at No. 5,226, and is fishing for tools in No. 5,227. Both of these wells are on the C. W. Preece land.

Powell County

The B. & B. Oil Co. is drilling at 700 feet in No. 7 Frank Rogers at Mount Springs in the South Fork district. Wireman Brothers has reached 200 feet in No. 2 James Belamy, also in the South Fork district.

Lawrence County

Reports from the Martha, Busseyville, Falisburg and Keaton districts in Lawrence County state that no operations are active in those districts.

Lee County

R. T. Barnes is at top of sand in No. 3 A. White in the Big Sinking district. C. E. Townsend is drilling in oil sand in No. 7 Andrew Combs and is getting a good well. In No. 6 on the same farm, Townsend is tied up with fishing job at 800 feet.

Rush Cable is drilling at 500 feet in No. 12 Lafayette Noe farm in the Big Sinking district. The South Penn Oil Co. has reached the 400-foot level in No. 95, Flahaven Land Co.'s land nearby. McCowan & Wising are drilling in oil sand in No. 4 Andrew Combs.

WESTERN KENTUCKY

OWENSBORO, Ky., Aug. 30.—Five oil completions, producing 135 bbls. initially; four gas wells and eight shallow dry holes comprised the completion record of the Western Kentucky fields in the past week.

In Hancock County, Floral district, Chester Oil Co. No. 9 J. W. Baughn was a dry hole through Barlow sand to a total depth of 512 feet. J. C. Ellis No. 18 Link Richards started at 5 bbls. a day from Jett sand, and was completed. Goverly Oil Co. was moving in machihne for No. 4 Baker Brothers. In the Patesville district, Cumberland Petroleum Co. was about ready to start drilling No. 1 Arington.

Ohio County

In the Fordsville district, Hancock County, A. Teller and others No. 1 Ritz Royal was good for only 50,000 feet of gas from Barlow sand at 698-714 feet and was abandoned as noncommercial. Likewise, Arthur Stewart and others No. 4 Jess Johnson, which was only a 20,000-foot gasser with a showing of oil in Barlow sand at 623-35 feet, total depth 645 feet.

In the Narrows district Staves & Hunter were moving in machine for No. 4 Powers.

Taffy district: J. C. Ellis No. 16 B. L. Gossett was a dry hole, total depth 720 feet; No. 18 J. T. Hoagland, dry hole, total depth 440 feet; No. 19 Ada Keith, spudding in. Taylor & Litens No. 2 Bartlett heirs was a dry hole, total depth 457 feet. Frank Bondell and others No. 5 M. S. Bartlett, drilling at 150 feet.

Buford district: Edwards & Gregory No. 6 W. F. Smith, spudding in.

Friendship Church district: A. Teller and others No. 3 Estill Board, spudding in.

Heflin district: W. W. Damron No. 1 R. C. Rowan, 350,000-foot gas well with 500 pounds rock pressure. Jones sand 1,168-75 feet; will drill to the Barlow sand.

McLean and Ohio Counties

Hardin pool: W. E. Hupp and others No. 24 Hackett Brothers, 10 bbls., Jett sand 1,132-47 feet, not shot, to be used as key well; No. 25 Hackett Brothers, 75 bbls.

(Continued on Page 89)

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Among Gulf Coast Drilling Contractors

Patrick & Tyrell of Oklahoma City received a contract from the Merit Oil Co. for a 7,500-foot hole to be drilled on the West Cotton Lake area in Chambers County, and the rig has been moved in for No. 1 T. and M. Wright in the Christian Smith Survey, several miles west of the Cotton Lake field and due south of Barbers Hill. The Merit Oil Co. was recently organized and the present test is the company's first wildcat venture.

Loffland Brothers marked up a record for themselves the past week when they ran a string of 11,342 feet of 7⅝-inch casing in 14 hours at Continental Oil Co. No. 1 Brookshire, located in the Abbeville field in Vermilion Parish. The well was drilled to its present depth in 84 days and is scheduled to be drilled below 12,000 feet, where it is expected to find sand that showed commercial possibilities in the company's first test. The hole was drilled with double drawworks, said to be among the largest ever used on the Gulf Coast. At the Shepherds Mott dome, Matagorda County, Continental Oil Co. No. 2 Hawkins is drilling below 7,500 feet in shale.

Drilling activity in the Amelia field in Jefferson County is expected to show a decline during the next few weeks as the limits of the field have been defined in practically all directions. The majority of the rigs will no doubt be moved to the Hastings or the recently opened Friendswood field in Harris County, which has the appearance of becoming one of the most important on the Gulf Coast.

O. W. Dyer completed a large distillate producer for the Atlantic Refining Co. in the LaBlanca field in Hidalgo County, and the rig is expected to be moved to another location. Contracts were received from the company for four additional wells in the McCampbell field, while at Magnet No. 3-B Cockburn is being completed in the 5,500-foot sand. At Dickinson No. 3 Schroeder has been completed for an initial production of 23 bbls. per day through a quarter-inch choke.

George Echols has two wells in the sand in the north extension area of the Heyser field in Victoria County. His No. 6 W. H. Bennett is bottomed at 5,749 feet with 7-inch casing cemented at 5,738 feet, while Sinclair Prairie Oil Co. No. 6 W. H. Bennett is drilling below 4,000 feet. Other activities are reported at Gillis in Coastal Louisiana and in the Lodi area in Marion County for the Fohs Oil Co.

Glenn H. McCarthy received contract for two additional wells to be drilled in the Palacios field in Matagorda County for Atlantic Refining Co. They are located on the Foley Land Co. and Palacios State Bank leases. One other outfit is located at West Beaumont.

Ben (Bud) Coyle has reached an interesting depth on the North Starks Prospect in Calcasieu Parish, where he is drilling D. D. Oil Co. No. 2 Lutcher Moore. Late in the week the hole was past the 6,600-foot horizon and is credited with having encountered several showings of gas. His other operations are confined to the Jeanerette field, where he has three rigs running for the Herton Oil Co.

Rutherford Drilling Co. has cemented a protection string of 7⅝-inch casing at 8,686 feet in United North & South Development Co. No. 1 L. Lambert, in the Buckeye field in Matagorda County and has received contract from the same company for No. 1 Ohio-Goodyear, 602 feet due west of No. 1 Stoddard, which recently extended the field to the southwest.

Of the 29 locations reported on the

(Continued on Page 99)

This crew of Loffland Brothers set a record when they ran in and completed 11,342 feet of 7⅝-inch casing in the fast time of 14 hours. The job was done for Continental Oil Co. at No. 1 Brookshire in the Abbeville field, Vermilion Parish, Coastal Louisiana. Left to right: T. A. Key, J. M. Sullivan, M. J. Cadenhead, T. D. Cardwell, S. N. Cherry and H. T. Tarvin (driller)

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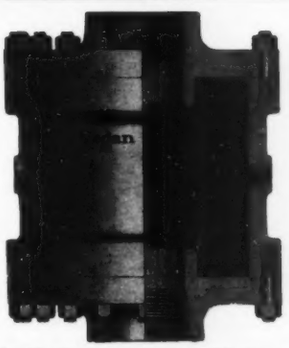

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Michigan Field Report

BUCKEYE FIELD ALLOWABLE IS CUT TO 75 BBLS. PER WELL

By O. C. PRESSPRICH

SAGINAW, Mich., Aug. 30.—Further drastic restriction of crude production from Buckeye Township's prolific oil pools was voted Thursday by the proration committee, which placed a flat allowable of 75 bbls. a day per well on the field effective September 1.

The curb is the strictest placed on the field since the proration committee started to function. The reduction in proration means a 50 per cent cut in allowable per well from the present curb of 150 bbls.

While the 75-bbl. curb appears drastic, operators declared the field would not actually be confined to this figure due to pipe lines continuing to make up underruns accumulated during recent weeks, which was the announced purpose of the 75-bbl. curb. The latest strict curb, it was said, would not be effective more than 30 days, by which time pipe line companies would have made up their underruns.

In conjunction with the 75-bbl. proration, pipe lines are to adjust their connections to coordinate the proration and allow a more equal distribution throughout the Buckeye field to take the full proration allowable.

James C. Graves, proration chairman, said the Buckeye field now has an open flow rating of approximately 100,000 bbls. a day, but that pipe line facilities and market conditions permit a withdrawal of only about 21,000 bbls. daily.

State to Lease

Wildcat oil land owned by the state of Michigan totaling nearly 40,000 acres will be available by operators for exploration when the state conservation department auctions lease rights to the land on September 3.

More than half of the territory on which the conservation department will lease oil and gas rights on a rental-royalty basis is in Roscommon County. Smaller plots of wildcat land are in Arenac, Gladwin, Bay, Clare, Crawford, Midland and Otsego counties. Many of the lease rights sold by the department in present active locations in Michigan bring the state heavy royalties on the rental basis.

Abandoned Wells

Conservation department statistics show that the Crystal oil field, only a short time ago Michigan's greatest, now rates 42 old oil wells plugged and abandoned against a total of 91 such wells in all Michigan oil fields.

Since January 1 Crystal has declined from 153 producing wells to 111 wells, which have a total production of 1,474 bbls. daily. Geologists and conservation men agree that main reasons for the decline of the field are the extremely shallow horizon of production and overpromotion. Overplay of the field followed completion of the sensational Durbin gusher. Wells plugged and abandoned include those which caused the chief sensations in the field, conservation men say. No. 1 Durbin, the Robbins lease, the Flint lease and Strait wells, all heyday producers, now are included in the abandoned wells.

Muskegon listed nine wells plugged and abandoned to come second to Crystal, two Muskegon wells being Monroe gassers. Muskegon, from a conservation point, ranked with Crystal and Saginaw fields as an overpromoted and overdrilled field. Present drilling methods would have prolonged the lives of both these fields and made possible the full recovery of investments, oil experts say.

Greendale and east extension listed seven abandoned efforts, followed by Porter with six. Six Lakes had five plugged efforts, West Branch and Vernon four each, Broomfield two and Geneva, Beaverton, Clayton and Bay County had one each.

Wildcat tests for a possible new Michigan pool featured oil developments of the week, with the prolific Buckeye Township field in Gladwin County holding secondary interest although it continued to forge ahead and extend its boundaries.

Of key interest, and continuing to hold the spotlight after a week of attention, was Harold J. Hands No. 1 Hoyt-Smart well, NE NE NW section 29, Bentley Township, Gladwin County. The wildcat was shut down earlier this week at 3,492 feet, 76 feet in the Dundee, when the hole filled with 1,800 feet of oil. The well was reported Friday to be drilling deeper with success assured. Structural formations at the Hands well were reported as higher than in many sections of Buckeye, Michigan's prize, and the possibility of a geological structure connecting with Buckeye was considered probable. The test is located in the extreme southeast part of Gladwin County, 10 miles southeast of the south (Oard) discovery pool of the Buckeye field. This week's developments at the Hands well caused a flurry among operators with the possibility of opening up hundreds of acres of additional territory.

After penetrating the cap rock and bringing a rush of oil in the hole, operations were shut down to provide tankage facilities. Later it was decided to drill deeper. Gladwin County, flushed by the success of its Buckeye field, viewed the Bentley strike with more evident enthusiasm than any since July 14, 1936, when the Oard discovery well was developed by Beaver Trust in section 25 of Buckeye.

Another wildcat endeavor, classed as a bolder attempt than the key-interest wildcat of the week, was the Wright & Keeler well on the shore of Saginaw Bay, 7 miles east of Bay City. The well was down 105 feet in the Dundee stratum on Saturday with a small show of gas but no other indications.

Judging from structural formations, the well promised favorably.

North (Wicklund) Pool

Top honors of the week in the production column go to Mammoth Producing & Refining Co. 2-D State, NE SE NE of section 14, Buckeye Township. The well, a southern boundary well of the north (Wicklund) pool, yet only three locations south and three locations east of the Wicklund 1-A State, discovery well of the pool, came in with a natural production of 40 bbls. hourly. It was holding up well late this week and was the best of the southern wells in the North pool. Several offset wells were planned to the south and east on the strength of the showing made by Mammoth's latest well.

Meanwhile extreme north and northwesterly development of the Buckeye field experienced a boom of drilling which promised to add more acres to the field's already extensive productive acreage.

Three wells were about to drill in this week under favorable conditions. Sun Oil Co., with extensive holdings in section 3 and section 10 lying immediately south, had two of the section 3 tests. They included No. 1 M. Baum, SW NW SW, and its No. 1 Strohkirch, NW SW SW, a south offset to the No. 1 Baum. Rowmer Corp. No. 1 Manyet, SW NW SE section 3, another northwesterly development, was ready to drill in.

C. W. Teater No. 3 Adamits, SW NW SW section 12, an eastern boundary well of the North pool, was reported due to come in, completing a number of boundary marker wells covering all sections of the field.

South (Oard) Pool

Midway pool development was spurred by the largest well in the pool to date, a southeasterly offset to Hanners Development Co. No. 2 Armstrong, which came in last week in section 23. The well is Rex Oil & Gas Co. No. 1 Wooding, NW SW SE section 23, which gave a gauged production of 600 bbls. daily after acid. The well came in 100 bbls. daily naturally last week, and stepped its production to peak for the midway field this week after an acid shot. It was considered significant because it is a southeasterly development and offset of the Hanners discovery wells which opened up the section and midway pool. According to the trend of producers in the field, a southeasterly direction is indicated, which bears out the prediction of a complete connecting link with the true south (Oard) pool. This also is borne out by the Hanners development north tests failure to find the trend in this direction.

Further strengthening the south and southeastward trend of development toward the Oard pool proper was a development in section 26, directly south of section 23. Herbert S. Smith No. 1 Foster, SW NW SE section 26, came in with a proration gauge of 60 bbls. daily natural. The well is to be acidized. The well is seven locations south of the Rex Oil & Gas well, tops for the week.

Section 36 in the extreme southeast corner of Buckeye continued to experience development this week. Turner Petroleum Co. No. 2 McMahon, NE SE SW, developed a natural production of 75 bbls. daily and was scheduled for acid. Gordon Oil Co. No. 1-C State, NW NW SE, was being cased preparatory to drilling in in section 36.

Midland County

Sun Oil Co. prepared to bring in its Consumers Power Co. No. 1 well in the C N half NE NE section 8, Edenville Township, as the drill point neared the Dundee. The well was reported drilling at 3,760 feet and was expected to top the Dundee lime at about 3,800 feet.

Tobacco Township—Gladwin County

Two miles away from Sun Oil Co.'s efforts in Midland County, its No. 2 Mary A. Hines topped the Dundee at 3,802 feet and the well was put on the pump at 3,896 feet, where oil was reported in apparently favorable quantities.

Broomfield Township—Isabella County

Broomfield Township recorded an oil well this week, for the first time since the discovery well was drilled two years ago, when Pure Oil Co. No. 6 Willie, NE NE NE section 4, came in with an estimated 500 bbls. natural flow. The well was completed in the Monroe sand at 3,624 feet. On offset, No. 7 Willie, was being completed at the week-end.

17 Permits

Six wildcat locations are included this week in 17 permits issued by the state department of conservation. Buckeye Township of Gladwin County again leads the permit list with seven locations, while Allegan's Salem field and Arenac's Clayton field received two locations each. Six other townships received one location each. Headlining the week's wildcats is the Cherry Valley Township well in Lake County drilled by Cherry Valley Development Co. Only one other well, a dry hole, has been drilled in the township. Two wildcat tests are scheduled to go down in Allegan County, one in Allegan Township, and the other in section 13 of Salem Township. J. V. Wicklund is drilling the Salem hole; Ervin L. Andrews the Allegan well. Another location has been staked near the Hanners-Armstrong lease in section 23, Buckeye, by Smith Petroleum Co. and Elzie S. Beaver, trustee. The well is an east offset to the No. 2 Armstrong completed recently. Bell & Marks are drilling another well in the midway Buckeye field, which will be a west edge test between the midway wells and the south (Oard) pool.

Clare, Midland and Montcalm counties also share in this week's drilling list.

Texas and Louisiana Gulf

By F. L. SINGLETON

AMELIA FIELD NOW DEFINED; PLAN IMPORTANT WILDCATS

HOUSTON, Tex., Aug. 30.—The completion of a distillate producer on the China (South Elton) Prospect, northern Jefferson Davis Parish, Coastal Louisiana, and the announcement of several important wildcat locations along the Texas Coast were the outstanding developments of a comparatively quiet week.

Stanolind Oil & Gas Co. No. 2-B Calcasieu National Bank, approximately 6 miles west of the Tepetate field in section 28-7s-3w, northern Jefferson Davis Parish, perforated casing at 8,955-65 feet, and is flowing at the rate of 2½ bbls. of 51-gravity distillate per hour through a three-eighths inch choke, with tubing pressure 3,000 pounds and casing pressure 2,150 pounds. The well is west of the same company's No. 1 Calcasieu National Bank, abandoned at 9,139 feet after topping a high-pressure gas sand at 9,137 feet.

China is the third field to have been found along a geophysical "high" extending in a northeasterly southwesterly direction, in which Church Point and Tepetate have been proven productive. Along this same high, preparations are being made by the Magnolia Petroleum Co. to test its Iota prospect, consisting of a block of 7,500 acres 8 miles southeast of China and about 5 miles south of the Tepetate field in Acadia Parish. The area was worked with geophysical instruments in 1934 and the well is to be drilled on the Henry Duson tract in section 14-8s-2w.

Attempting to complete the well as an oil producer at South Roanoke, another distillate field in Jefferson Davis Parish, Union Sulphur Co. got instead a large dry gasser, and the well has been killed preparatory to plugging back. It is No. 1 T. R. S. Farms, 6,000 feet northwest of the discovery well in section 23-10s-4w. It was tested through perforated casing at 9,136-40 feet and tested an estimated 5,000,000 feet of dry gas per day through a quarter-inch choke. The well was shut in after the casing pressure built up to 3,500 pounds. It is planned to plug back and test at approximately 8,600 feet, which is the approximate depth of the discovery well.

In the Big Lake field in Cameron Parish, Union Sulphur Co. was preparing to test two wells that are expected to give the field its second and third producers. No. 1 Henry Hebert, section 18 is bottomed at 9,212 feet with casing cemented on bottom. No. 1 P. D. Hebert was tested through perforated casing at 8,390-93 feet and has been killed to plug back to a higher level after it showed salt water.

In the extreme northern portion of the southwest flank of the Jennings field, Acadia Parish, screen was being run at Cosmo Petroleum Co. No. 1 Crusel, bottomed in more than 100 feet of oil sand at a total depth of 6,908 feet. The sand is reported to have been topped much higher than other wells on the flank which encourages development much further out from the dome. Location is in section 42. Superior Oil Co. No. 6 William Leckelt, section 42 flowed 406 bbls. per day through a 14/64-inch choke with tubing pressure 1,300 pounds and casing pressure 1,375 pounds. It is the twenty-second producer for the southwest flank of the dome.

With a record string of 11,342 feet of 7⅝-inch casing successfully cemented in the short time of 14 hours, Continental Oil Co. was ready to drill plug preparatory to drilling No. 1 Brookshire at the Abbeville field, Vermilion Parish to the 12,000-foot horizon where it is expected to pick up the same sand that attempted to blow out in the company's first test, No. 1 O. C. Hebert. Due to mechanical trouble the latter test was plugged back and completed for a distillate producer at 7,600 feet.

Salt Water Kills a Record

Humble Oil & Refining Co. No. 1 Ellender, Lirette field, completed several weeks ago as the world's deepest producer at 11,619 feet, has been killed due to salt water intrusion and preparations are being made to plug back and test at a higher level in the 11,000-foot horizon.

On the Timbalier Bay Prospect, Lafourche Parish, Gulf Oil Corp. was running casing at No. 3 State which last week showed for a commercial producer when it tested 1,000 feet of 32-gravity oil on a drill stem test at 6,749-6,846 feet. The hole was cored to a depth of 6,848 feet. Location is in section 36-23s-21e.

On the recently discovered Potash Salt dome, Plaquemines Parish, Humble Oil & Refining Co. has made six locations, all on the Orleans Levee Board lease and in sections 12, 10 and 9-18s-5e. It is a shallow dome with the Caprock found from 600 to 700 feet.

Texas Coast

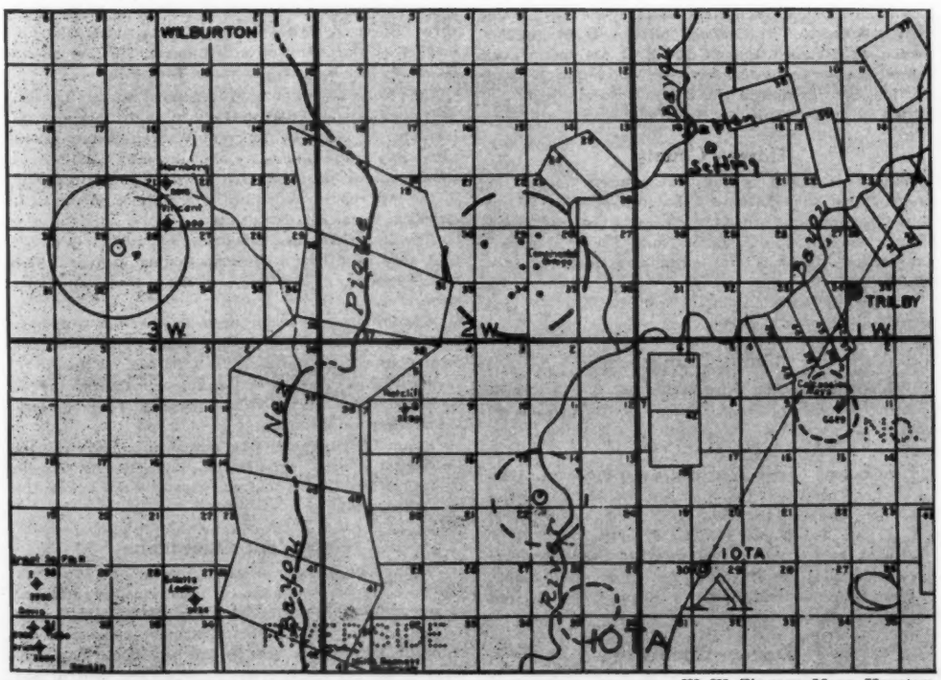
Along the Texas Coast, interest continued to be centered on the Friendswood field, southern Harris County as casing was being run, preparatory to testing Humble Oil & Refining Co. No. 1 Beaumer, 933 feet northeast of the discovery well, which is expected to give the area its third producer. Although the well offsets the discovery well it is of particular interest due to the fact that it topped the sand at 5,769 feet, or 42 feet higher than in the discovery well, and confirms the geophysical picture which shows the high part of the structure to be located to the north. No. 1 Beaumer cored 176 feet of oil sand to a total depth of 5,945 feet. In the southeast extension area, V. H. Borsodi No. 1 Ross flowed 520 bbls. of pipe line oil on a 24-hour potential test through a quarter-inch choke with tubing pressure 750 pounds and casing pressure 900 pounds. Drilling operations have started on the same operator's No. 2 Roos while locations have been made for Nos. 1 and 2 Lena Berlowitz on a 20-acre tract offsetting the Ross tract to the south in the Thomas Choate Survey.

In the Bammel area, Harris County, Superior Oil Co. was scheduled to test No. 1 Beutler after plugging back to 6,700 feet. Perforations are to be made in the Cockfield horizon at around 6,300 feet, the same section from which the discovery well to the west is producing distillate. No. 1 Buetler is the deepest test drilled along the so-called Conroe trend, reaching a depth of 10,574 feet. A 15-minute drill stem test through perforations at 9,776-9,806 feet showed two stands of salty water. Location is in the Ehrhardt Survey.

Important Wildcat Locations

There were four important wildcat locations made the past week. On the West Cotton Lake Prospect, Chambers County, Merit Oil Co. has rigged up for No. 1 T. & M. Wright located in the Christian Smith Survey. It is situated west of the Cotton Lake field and south of Barbers Hill, and is scheduled to test the Frio sand. In Hardin County in what is known as the Hathaway area, Coronado Oil Co. has rigged up No. 1 Ryan, in block 38, J. G. Bell Survey, while in the northeastern part of the county, Humble Oil & Refining Co. is building road to No. 1 C. McShone, S. R. Fisher Survey. Both will test the Cockfield and Cook Mountain horizons, productive in the Silsbee and Spurger fields in Hardin and Tyler counties.

With the completion of two additional producers on the north flank of the West Columbia field in Brazoria County, a revival of drilling activity is expected for this old field. Texas Co. No. 16 Abrams, in the George Tennille Survey, flowed 624 bbls. per day through a quarter-inch choke from a screen setting at 5,490-5,604 feet, while Texas Co. and Sterling Oil & Refining Co. No. 2 G. Phillips flowed 156 bbls. in two hours through a half-inch choke with tubing pressure 410 pounds. The latter test is producing from a screen setting at 5,578-5,636 feet. This area is located



W. W. Zingery, Maps, Houston

Completed circle shows location of new China or South Elton field, Jefferson Davis Parish, Louisiana, in relation to Tepetate field (indicated by broken circle). Location of interesting wildcat of Magnolia Petroleum Co. No. 1 Duson is indicated by small broken circle.

about a half mile north of the field and is the first Frio production developed.

In the north extension area of the Heyser field, Victoria County, two near to completion, George Echols No. 6 W. H. Bennett is bottomed in sand at 5,749 feet with 7-inch casing cemented at 5,738 feet while Sun Oil Co. No. 1 Coffey is testing at 5,747 feet. Seven inch casing was cemented at 5,740 feet.

Amelia Field Defined

With the completion of two dry holes in the Amelia field, Jefferson County, drilling activities are expected to decline as the field is now practically defined in all directions. On the east side, Humble Oil & Refining Co. No. 4 Langham was abandoned in salt water sand at 6,810 feet while the same company's No. 8 J. H. Phelan on the west side was quit at the same depth after topping the salt water sand at 6,785 feet. The only direction in which production has not been defined is to the southeast, but geological data indicates that production cannot be expected to be extended much further.

In the Hardin field, Liberty County, L. W. Wickes No. 1 Lynott & Buffam has been abandoned at 7,703 feet. It is a north offset to Jack Frazier No. 2 Lynott & Buffam in the J. Robeson Survey. In the southwest extension area, Shell Petroleum Corp. No. 1 Cessna is drilling in shale and sand below 6,900 feet, and the same company has made location for No. 1 Cochran, 1,500 feet east of No. 1 Roberts, a producing well in the H. B. Johnston Survey. In the northeastern part of the field and 1,800 feet west of Jack Frazier No. 2 Lynott & Buffam, Frazier has rigged up No. 1-A Lynott & Buffam. It is being drilled on a lease farmed out by the Amerada Petroleum Corp.

At Magnet, Wharton County, Atlantic Refining Co. No. 3-B H. C. Cockburn is bottomed in oil sand at 5,542 feet and the casing is being perforated for a production test. Humble Oil & Refining Co. No. 1 H. C. Cockburn, originally completed for the best producer in the field, began to make salt water and it was killed and recompleted for an initial production of 6 bbls. per hour, but due to the high gas-oil ratio it is being killed to reperforate at 5,525-5,530 feet.

In the Needville area, Fort Bend County, location has been made by Humble Oil & Refining Co. for No. 1 F. H. Schulze in Lot 15, Robert Hodge Survey.

Kansas Fields

(Continued from Page 68)

ican National Petroleum Co. No. 1 Wadell, NW NE SW section 12-20-2w, set 5-inch at 2,964 feet; H. & M. Drilling Co. No. 1 Patterson, NW NW SE section 24-19-3w, rig.

Rush County

Three wells were completed in the Otis sector, Rush County. Morgan & Flynn and others No. 4 Koril B, NE NE SW section 23-18-16w, had LaMotte sand at 3,485 feet, total depth 3,555 feet, flowed 165 bbls. of oil in four hours and made potential of 990 bbls. of oil, with an estimated 40,000,000 feet of gas.

Carter Oil Co. No. 1 Hergert, CNL NE SE section 26-18-16w, flowed 286 bbls. of oil in four hours and made potential of 1,428 bbls. Top of La Motte sand was 3,519 feet with pay at 3,550-53 feet, total depth.

Morgan & Flynn and others No. 1 Schroeder, NE cor. section 26-18-16w, was temporarily abandoned at 375 feet, total depth.

Ellsworth County

Continental Oil Co. and others No. 5 Rolfs, SW SE NW section 34-17-8w, Edwards area, Ellsworth County, topped Siliceous lime at 3,200 feet, was bottomed at 3,230 feet, acidized and made potential of 914 bbls. of oil.

Continental Oil Co. and others No. 11 Janssen B, NW NE SW section 34-17-8w, made potential of 740 bbls. of oil after acidizing Siliceous lime topped at 3,204 feet, total depth 3,236 feet.

Same operator's No. 1 Steinberg, SW SW SE section 27-17-8w, had Siliceous lime at 3,267 feet and was dry and abandoned at 3,272 feet, total depth.

Transwestern Oil Co. No. 1 Meyers, SW NW NW section 18-17-10w, was a rig. Continental Oil Co. and associates No. 6 Rolfs, NW SE NW section 34-17-8w, was a rig.

Butler County

Recent completions in Butler County included Phillips Petroleum Co. No. 17 Scully, NW SW NE section 17-23-4e, total depth 2,072 feet, plugged back to 2,025 feet, and made potential of 267 bbls. of oil. Jayhawk Oil Co. No. 2 Fitch, NW NW NE section 5-25-4e, total depth 2,741 feet, pumped 5 bbls. of oil daily. National Refining Co. No. 3 McCullough, NW NW SE section 1-28-6e, made potential of 495 bbls. of oil at 3,181 feet, total depth.

A. M. Landon No. 2 McCaig, SW NE SE section 13-28-6e, was rigging up standard tools.

Sumner County

Stelbar Oil Corp. No. 3 Barlow A, SW SE SE section 33-31-1w, Wellington pool, Sumner County, flowed 150 bbls. of oil in 24 hours after acidizing Chat topped at 3,665 feet, total depth 3,705 feet.

Greenwood County

Luderman No. 1 Wright, C NE SW section 23-26-9e, Greenwood County, had sand at 780-82 feet, total depth, and produced 1,000,000 feet of gas.

Young & Spencer No. 1 Sowder, NE NE SW section 31-25-13e, had a hole full of water in Siliceous lime at 1,963-93 feet, total depth, and was abandoned.

One Greenwood County well was completed the previous week. Seven-Eleven Oil Co. No. 2 Evans, SW NE NW section 7-22-10e, was a 20-bbl. pumper at 2,435 feet, total depth.

New work in Greenwood County: Moeter No. 7 Ledgerwood, NW SE NW section 36-27-8, lowering 10-inch casing at 1,105 feet; H-A-L Oil Co. No. 4 Wright, CWL NE SW section 23-26-9e, set 7-inch casing at 759 feet; McGinnis No. 2 Jackson, NW SE NW section 25-25-8, drilling below 1,450 feet; Shull Drilling Co. No. 8 Allis, NE SW NW section 17-24-13, set surface casing at 35 feet and drilling ahead; Ohio Oil Co. No. 9 Loutt-McNeil, NE NE SW section 22-23-13, rigging up; Seven-Eleven Oil Co. No. 3 Evans, SW NE NW section 7-22-10, machine.

Woodson County

Braden & Aikman No. 1 Arnold, NW SW NE section 35-23-14, Woodson County, had Mississippi lime at 1,607 feet, total depth 1,623 feet, and pumped 15 bbls. of oil and 5 bbls. of water daily.

Becker Brothers No. 1 Vern, NW SW SE section 22-25-14, was moving in machine.

Chautauqua County

Sagamore Oil Co. No. 1 Cunningham SE SE SW section 8-32-11, was a recent Chautauqua County completion. It produced 1,250,000 feet of gas at 1,454 feet, total depth. Sinclair Prairie Oil Co. No. 48 Casement, SE SW SE section 32-33-11, was completed as a 15-bbl. pumper after plugging back to 1,845 feet from 1,850 feet, total depth.

First reports of new Chautauqua County work: Sinclair Prairie Oil Co. No. 5 Barrum, NE SW NE section 20-34-9, location; same company's No. 50-A Casement, SE NW SE section 32-33-11, spudded; Sagamore Oil Co. No. 24 Landon and Floyd, SE SE NW section 32-32-11, set 10-inch casing at 421 feet; Skiles and others No. 2 Shaffer, NW SW NE section 23-32-10, location; Shaffer-Howell No. 3 Landon and Floyd, NE SE SW section 23-32-10, location.

Harvey County

Wells completed recently in Harvey County included Derby Oil Co. No. 1 Lehman, SW SW NW section 13-22-2w, total depth 3,314 feet, potential 1,635 bbls. of oil, and T. C. Palmer No. 1 Schreg, NW NE NW section 31-23-3w, total depth 3,368 feet, potential 804 bbls. of oil.

Palmer and associates No. 1 well, NE NW NW section 31-23-3w, was a cellar.

Grant County

Panhandle Eastern Pipe Line Co. No. 1 Neese, C section 30-30-37w, Grant County, produced 5,250,000 feet of gas and was completed at 2,925 feet, total depth.

Completions of the preceding week in Grant County: United Production Co. No. 1 Julian, C NW section 26-30-35w, total depth 2,583 feet, produced 3,500,000 feet of gas. Panhandle Eastern Pipe Line Co. No. 1 Towles, C SE N half N half section 26-30-37w, produced 5,000,000 feet of gas at 2,850 feet, total depth.

United Production Co. No. 1 Reed, C SW section 1-30-35, was a location.

Stevens County

Benedum-Trees Oil Co. No. 1 Beavers, C NE section 11-35-38w, Hugoton area, Stevens County, had first gas at 2,668 feet, total depth 2,800 feet, and produced 3,450,000 feet of gas.

Two Stevens County wells were completed previously. Panhandle Eastern Pipe Line Co. No. 1-8 Youngren, C S half S half SW section 8-32-38w, produced 7,800,000 feet of gas at 2,739 feet, total depth. Benedum-Trees Oil Co. No. 1 Watkins, C NW section 34-34-38w, total depth 2,850 feet, produced 5,700,000 feet of gas.

Kuhn Brothers No. 1 Nix, C SW section 2-34-39w, set 10-inch casing at 561 feet and was waiting.

Other New Activity

In Chase County, California-Illinois-Kansas Oil Co. No. 2 Hughes, NW NW SE section 13-22-9e, was a machine.

In Osborne County, F. E. Fullerton & Son No. 1 Moray, NE NE SW section 27-10-12w, wildcat, set 13-inch casing at 50 feet.

In Pawnee County, Stanolind Oil & Gas Co. and Amerada Petroleum Corp. and others No. 1 Belt, NE NE SW section 13-20-16w, was moving in.

New York - Pennsylvania Gas Field Operations

COUDERSPORT, Pa., Aug. 30.—A showing of gas in the Godfrey L. Cabot, Inc., test on the A. J. Pride farm, Westfield Township, Tioga County, southeast of the Harrison field, featured the weekly report on operations on the New York-Pennsylvania deep sand gas fields.

The Cabot test topped the Oriskany at 4,965 feet and was drilled 1 foot into the sand where it gauged 100,000 feet and shut down for casing. The top of the Onondaga lime was believed to be at 4,960 feet.

The S. J. Brendel test on the E. H. Ackerman farm in the new Woodhull Township field of Steuben County also topped the Onondaga limestone and will be, apparently, the third well to be completed in the new field. It reached the Onondaga at 4,082 feet and after setting casing at 4,097 feet was drilled to 4,104 feet.

Pennsylvania Operations

Eight wells, mostly in and about proven areas, are drilling in Potter County. Godfrey L. Cabot, Inc., struck a gas pocket at 4,180 feet in its test on the A. Bean farm and is now shut down. This test topped the Tully limestone at 4,140 feet and found salt water 5 feet in the lime.

In other Potter County operations, the Potter Development Co. is held up with fishing jobs on its two wildcats in Keating and West Branch Townships. The former well, on the Crawford farm, is down 5,420 feet and the latter, on the Haupt farm, is down 5,675 feet. The company is cleaning out after cementing tools lost at 5,143 feet on the Ida Scoville farm, Harrison Township.

Godfrey L. Cabot, Inc., is fishing at 2,778 feet on the R. Johnson farm, Bingham Township, and Penn York is recementing casing in its test on the M. Reynolds farm, Harrison Township, which has been drilled to 4,911 feet. P.P.&L. Co. is drilling at 540 feet on the G. M. Whitman farm, Harrison Township.

The Kent Kane well on Government Surface Lot 515, Watson Township, Warren County, is drilling at 4,101 feet. In the other two current Warren County operations, Evjen and others are shut down at 1,520 feet on the Dusenberry farm, Watson Township, and Updegraff, at the last report, is drilling at 3,565 feet on the C. E. Erickson farm, Elk Township.

The H. C. Drilling Co. is drilling at 2,530 feet on the first deep sand test in McKean County in years. This test is located on the Van Scoy farm, Hamilton Township.

In addition to the Cabot well, another test is drilling in Westfield Township, Tioga County. The New York State Natural Gas Co. is down 2,830 feet on the A. W. Leonard farm. The Potter Development Co. test on the C. Learn farm, Farmington Township, Tioga County, is shut down at 4,105 feet.

Potter Development Co. is rigged up to run casing in its wildcat test on the N. D. Dahl farm, Hayfield Township, Crawford County, extreme westerly test among the current operations.

New York Operations

While New York interest focuses on the Woodhull field, a considerable amount of interest is also attached to the well which the Cunningham Oil & Gas Co. will deepen on the Norman Phelps farm in Addison Township, Steuben County, east of the new field. The company is moving in material to deepen the well, drilled previously to a depth of 2,300 feet.

Seven wells, in addition to the Brendel well, are drilling in Woodhull Township while material is being

(Continued on Page 82)

Oklahoma Operations

By
DAL DALRYMPLE

NEW TILLMAN COUNTY POOL; STEPHENS DEEP TEST FLOWS

Wildcats in Stephens and Tillman counties provided encouraging news for Oklahoma operators the past week as both opened new producing areas. A once promising Grant County wildcat was having trouble with water, an outpost in Seminole County was completed to open a new gas area and tests seeking new production in Logan and Beckham counties were abandoned.

The Tillman County discovery well is the Indian Territory Illuminating Oil Co. and Foster Minerals Corp. No. 1 Graham, NW SW NE section 1-3s-19w, near the Red River and southwest of Frederick. It made several head flows, one as large as 130 bbls. of oil, and at the week-end was swabbing from 60 to 70 bbls. of oil an hour. The oil tested 39.6 gravity at 77° temperature. It was free of water. Production is from Canyon lime at 3,078-81 feet, with 9-inch casing set at 3,074 feet. After cleaning out, the operators were to decide whether to run tubing and test, put on pump or drill deeper.

Carter Oil Co. and others No. 1 Harley, C NE NE section 24-2s-3w, opener of a deep producing zone in the old Milroy area of southeastern Stephens County, was shut in for pipe line connections after flowing at the rate of 115 to 120 bbls. of high-gravity oil an hour. It was bottomed at 8,157 feet, with production from Oolitic lime at about 7,555 feet.

Operators still were trying to make a producer at Carter Oil Co. and others No. 1 Crissman, C W half SW NW section 16-25-3w, Grant County wildcat that caused considerable excitement when it showed oil on drill-stem test. It was bottomed in Wilcox sand at 5,405 feet. It was bailed down to 4,200 feet and showed about three-fourths fluid and water and the remainder oil. Source of the water has not been determined.

A majority of operators in the Fitts field, Pontotoc County, have agreed to lease-basis proration for all zones of the field, and a petition asking that the change be made from well-basis proration was expected to be filed with the Corporation Commission.

Leases on 3,857.59 acres of Indian lands were sold at the Five Civilized Tribes sale in Muskogee last week, bringing a total bonus of $10,260.42, plus $15,757 bid for two old railway right of way tracts in the Fitts field. The latter amount has been impounded by the agency pending settlement of title to the land, approximately 7 acres claimed by the Choctaw and Chickasaw tribes and several oil companies.

Wildcat Completions

Bud Lewis No. 1-A Douglas, C SE NE section 21-8n-26w, wildcat in Beckham County, had a hole full of water and was dry and abandoned at 2,237 feet, total depth, in Dolomite.

Shell Petroleum Corp. and associates No. 1 Waddle, SW SE NW section 36-15-4w, Logan County wildcat, topped first Wilcox sand at 6,670 feet, second Wilcox sand at 6,757 feet, total depth 6,791 feet, and was dry and abandoned when Schlumberger survey indicated salt water.

Gillespie & Moran No. 1-A Gaines, NE SW SW section 20-6-7, opened a new gas area in southern Seminole County. It topped Gilcrease sand at 2,707 feet, was bottomed at 2,737 feet, and produced 34,100,000 feet of gas daily, with a slight showing of oil.

Pontotoc County

Two Hunton lime producers and a trio of Cromwell sand wells were completed in the Fitts field, Pontotoc County.

Stanolind Oil & Gas Co. No. 7 Norris E, SE SW SE section 25-2-6, topped Hunton lime at 3,380 feet, was bottomed at 3,654 feet, acidized and made potential of 2,286 bbls. of oil, with 2,200,000 feet of gas.

Magnolia Petroleum Co. No. 1 Reeves, SE SE NE section 35-2-6, swabbed 79 bbls. of oil in 24 hours, was treated with acid and made potential of 965 bbls. of oil. Top of Hunton lime was 4,055 feet; total depth 4,270 feet.

Bishop Oil Co. No. 5-B Simpson, NW cor. section 28-2-7, found Cromwell sand at 2,560 feet, total depth 2,665 feet, and flowed 95 bbls. of oil daily.

Skelly Oil Co. No. 23 Park College, NE NE NW section 28-2-7, had Cromwell sand at 2,522 feet, was bottomed at 2,610 feet and flowed 102 bbls. of oil in six hours. Same company's No. 24 Park College, NW SW NE section 28-2-7, flowed 229 bbls. of oil in 16 hours from Cromwell sand topped at 2,408 feet, total depth 2,555 feet.

E. H. Moore No. 2 Thompson, SE cor. section 33-2-7, an old Fitts well, was shot at 3,767-85 feet and 4,065-98 feet, acidized and pumped 22 bbls. of oil and 22 bbls. of water in 18 hours.

New work in Pontotoc County: F. N. Campbell No. 1 Owensby, SE SW SW section 21-3n-4, an old well, was deepened from 287 feet to 939 feet and was underreaming casing; Carter Oil Co. and Gulf Petroleum Corp. No. 1 Wells, SE SE NW section 2-1n-7, cellar; Magnolia Petroleum Co. No. 14 Norris, SE SW SE section 21-2n-7, location; Skelly Oil Co. No. 1 Daniel, SE SE NW section 21-2n-7, cellar and pits; Magnolia Petroleum Co. No. 25 Simpson, SE SE NE section 29-2-7, location; E. H. Moore No. 1-A Scott Brown, NE SE SE section 33-2-7, cellar and pits; same operator's No. 1-A Thompson, NW SE SE section 33-2-7, location.

Estimated Daily Production

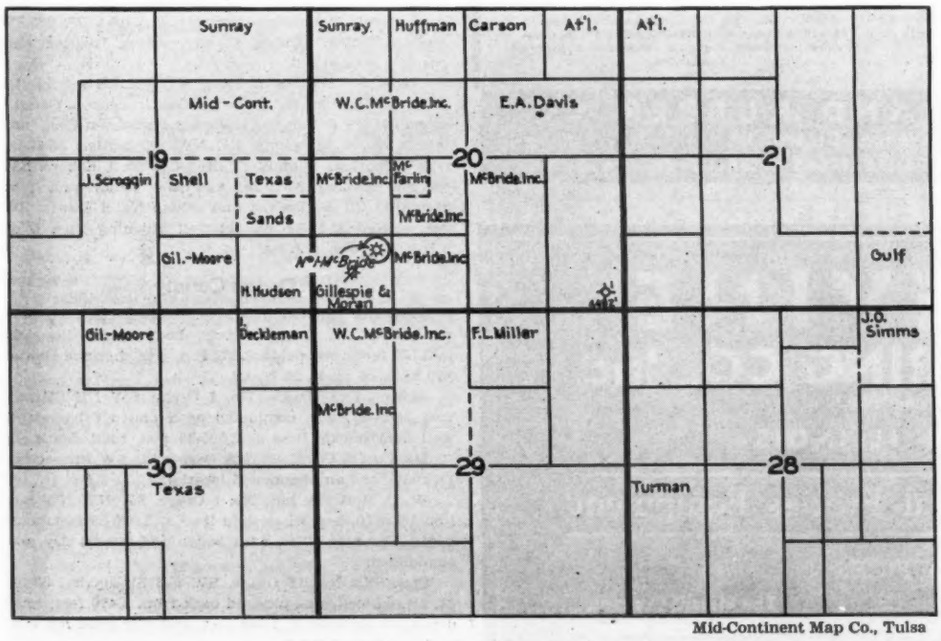
Estimated daily production of Oklahoma for the week ending August 28, and for the preceding week, was as follows:

	Barrels	
	Aug. 28	Aug. 21
Allen	5,375	5,425
Billings	8,000	7,575
Burbank	8,100	8,075
South Burbank	15,900	15,750
Balance Osage	21,925	21,725
Blackwell district	5,475	5,500
Bristow-Slick	7,650	7,625
Chandler	3,000	2,950
Crescent	10,375	10,300
Cromwell	3,575	3,400
Cushing-Shamrock	10,800	10,750
Duncan district	4,025	4,000
Edmond	18,100	18,700
Fish	6,700	7,000
Fitts	93,750	97,550
Jesse	3,650	4,650
Graham	4,400	4,425
Gray	1,125	1,150
Healdton	10,300	10,250
Hewitt	4,350	4,375
Holdenville	925	900
Keokuk	9,950	9,975
Konawa	1,400	1,450
Lucien	15,150	14,825
Moore	11,825	11,950
Oklahoma City	156,550	162,200
Olympic	12,100	12,275
Polo	1,050	1,075
Sasakwa and townsite	2,625	2,725
Sholem-Alechem	3,200	3,175
Seminole:		
Bowlegs	12,050	11,850
Carr City	5,350	5,425
Earlsboro	5,950	6,275
South Earlsboro	700	725
East Earlsboro	7,650	7,625
Little River	11,300	11,400
East Little River	1,050	1,325
Maud	775	850
Mission	2,100	2,075
Seminole	9,575	9,400
East Seminole	2,775	3,025
Searight	4,500	4,525
Total Seminole	63,775	64,500
St. Louis-Pearson	19,500	20,250
Tatums	5,450	5,475
Tonkawa-Garber-Thomas	5,000	5,025
Wewoka	3,000	3,250
Yale-Jennings	4,300	4,275
Other pools	79,150	79,100
Total Oklahoma	641.525	653,600

Seminole County

Bill Ansley No. 2 Anders, NW cor. section 23-6-6, Seminole County, had sand at 2,344 feet, total depth 2,360 feet, was shot at 2,345-55 feet and swabbed 150 bbls. of oil in 24 hours.

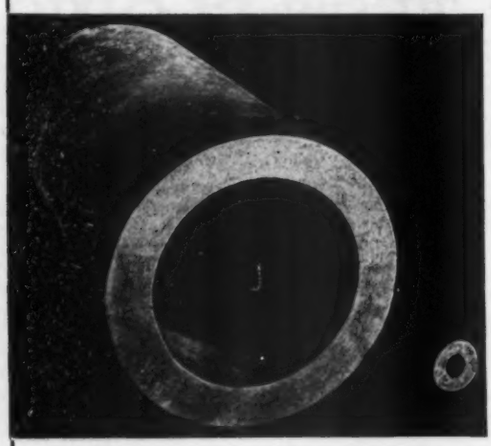
M. E. Hodge No. 1 Ong, SE SE NE section 28-8-7, found Booch sand at 3,180 feet, was bottomed at 3,212



Mid-Continent Map Co., Tulsa

A new gas area was opened in Seminole County at Gillespie & Moran No. 1 McBride, NE SW SW section 20-6-7

VIBRATION PUBLIC ENEMY NO. 1



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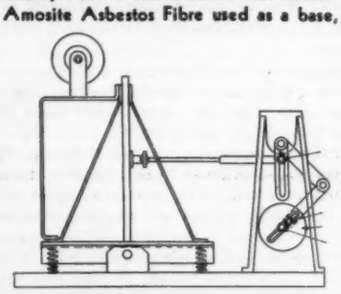
MODERN UNIBESTOS HEAT INSULATION *is VIBRATION-PROOF!*

UNIBESTOS is so different from ordinary pipe covering that it actually marks a new order of heat insulating efficiency in the power world. Because of the distinctive Amosite Asbestos Fibre used as a base, Unibestos offers a combination of vital advantages heretofore thought impossible in a single insulating material.

Strong and rugged, yet fibrous in nature, its high insulating value is permanently maintained against the severest vibration found in power practice. (Note test results below.) It is clean-cut and hugs the pipe with a precision fit—further protection against vibration. It cannot shake down or disintegrate, shrink or crumble. And Unibestos is amazingly light in weight, so that even the big, husky 24-inch section is easily handled by one man!

With its low first cost and low application cost, Unibestos insulation becomes a true asset to any power plant, offering years of heat-saving service, without maintenance or replacement. There is no sounder investment.

Furnished in sectional form up to 24 inches diameter and easily utilized for removable flange insulation. It will pay you to write for full data and samples. No obligation.



UNIBESTOS, when tested on this special Vibration Machine continuously for 100 hours at 700 vibrations per minute, shows no shakedown or fracture whatever.

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J. A. Rossiter Co.,
P. O. Box 1095,
Houston, Texas

The Merrill Company,
343 Sansome Street,
San Francisco, Calif.

feet, perforated casing, shot and pumped 18 bbls. of oil in 24 hours.

W. D. Grisso and others No. 2 Orwig, SW SE SE section 15-6-6, was temporarily abandoned at 1,997 feet, total depth.

Devonian Oil Co. No. 1 Roberts, NW NW NE section 27-7-7, and Rudman and others No. 1 Mann, SW NE NW section 23-6-6, were temporarily abandoned locations.

Winona and others No. 1 Harris, SW SE SE section 18-7-8, an old well bottomed at 4,330 feet, was cleaned out and shot, swabbed as high as 240 bbls. of oil in 24 hours from Gilcrease sand at 2,950-85 feet, and was put on pump.

First reports of new activity in Seminole County were as follows: Carter Oil Co. No. 1 Campbell, NW NW SW section 20-9-6, an old well being deepened from 4,242 feet, drilling at 4,249 feet; Jack Lynch No. 2 Doner, SE SW NE section 24-5-5, an old well being deepened from 2,714 feet, drilling at 2,750 feet; Wood Oil Co. No. 1 Fleet, SW SE NW section 12-5-7, rig.

Hughes County

Manahan Oil Co. No. 9 Oliphant C, NW NE SW section 1-9-8, Olympic field, Hughes County, was completed as a representative well at 1,698 feet, total depth.

Mid-Continent Petroleum Corp. and Carter Oil Co. No. 1-A Hampton, C NE section 1-9-8, was completed as a repressure well at total depth of 1,712 feet.

Pottawatomie County

Magnolia Petroleum Co. No. 1 Jones C, NE SW NE section 18-7-4, St. Louis district, Pottawatomie County, found Hunton lime at 3,825 feet, total depth 3,931 feet, and swabbed 40 bbls. of oil in 24 hours. It was treated with acid, flowed 405 bbls. of oil gross in 15 hours, and later flowed 524 bbls. in 24 hours, through tubing.

Tilico Oil Co. No. 1 Hulsey, SW SE SW section 26-7-4, topped Dolomite at 4,182 feet and at 4,229 feet swabbed 60 bbls. of oil in 24 hours. It was acidized with 5,000 gallons and pumped 402 bbls. of oil with an estimated 2,000 bbls. of water in 24 hours. It was deepened to 4,262 feet, total depth, acidized again with 5,000 gallons and pumped 50 bbls. of oil and 2,250 bbls. of water in 24 hours.

Indian States Oil Co. No. 2 Gunter, NW NW SW section 32-11-4e, was a temporarily abandoned location.

Okfuskee County

Blackwell Oil & Gas Co. No. 1 Dalton, SE SE NE section 36-10-8, an old well in the Okfuskee County part of the Olympic field, was deepened from 1,747 feet to 1,753 feet, shot and pumped 64 bbls. of oil and 26 bbls. of water daily.

Harry Stekoll and Sinclair Prairie Oil Co. No. 4-A Hilderbrant, C S half N half SE section 16-11-11, was location for a new Okfuskee County test.

Lincoln County

Amerada Petroleum Corp. No. 2 James, SE SE SW section 35-13-5, Lincoln County, was a location temporarily abandoned.

Ardie Oil Co. No. 1 State, NE NE SE section 16-14-4, was location for a new wildcat in Lincoln County. Stanolind Oil & Gas Co., Amerada Petroleum Corp. and others No. 4 Crawford, NE NW SE section 35-15-2e, was a location. Summit Drilling Co. No. 1 Eakers, NW SE SW section 35-15-2e, had dug Cellar and pits. Stanolind Oil & Gas Co. and others No. 1 Lewis, SW cor. section 33-15-3e, an old well plugging back from 5,112 feet, was fishing.

Osage County

Magnolia Petroleum Co. No. 10 Osage, SE SW NW section 11-26-6, Osage County, had Bartlesville sand at 2,780 feet, total depth 2,852 feet, was shot and flowed 100 bbls. of oil in 24 hours.

Sidwell Drilling Co. No. 4 Osage, SW NE SE section 28-24-11, was completed as a one-half barrel oil well in Arbuckle lime at 2,005-35 feet, total depth.

Mid-Co Oil Corp. No. 2-A Osage, SE SW SE section 18-22-10, was an abandoned location.

W. C. McBride, Inc., No. 1 Osage, SW NW NW section 16-23-10, had Mississippi lime at 2,220-25 feet, total depth, the hole filled with water and it was dry and abandoned.

C. I. Sills No. 18 Osage, SW NE SE section 32-23-11, an old well, was plugged back from 2,420 feet, total depth, to big lime at 1,248 feet, and was good for 4 or 5 bbls. of oil daily.

Wolverine Oil Corp. No. 2 North Avant Unit, SE section 31-24-12, an old oil well, was deepened from

1,730 feet to 1,737 feet and recompleted as a repressure well. Same company's No. 7 North Avant Unit, NE SE SE section 31-24-12, an old well, was deepened from 1,720 feet to 1,740 feet, produced 7 bbls. of oil naturally in four hours and was completed. The company's No. 18 North Avant Unit, SE NE NE SW section 31-24-12, an old well, was deepened from 1,588 feet to 1,703 feet, and was to test.

Moore Oil Co. and others No. 31 Osage, NW SE SW SW section 9-21-9, was a location. Indian Territory Illuminating Oil Co. No. 449 Osage, NE SE NE section 7-24-9, was a location. Lewis Production Co. No. 3 Osage, NE NW NW section 34-24-7, was a location. Lewis Production Co. and Phillips Petroleum Co. No. 7 Fred Lookout, SE NE NW section 9-24-7, was a location.

Pawnee County

J. F. McManmon, Lion Oil & Refining Co., T. J. Redd and the Riverland Oil Co. were building rig for a test in NW cor. section 16-21-5, south of Pawnee in Pawnee County. Helmerich & Payne have the drilling contract.

Noble County

The following new work was reported in Noble County: Continental Oil Co. No. 9 Conway, NE SE SW section 16-23-2w, digging cellar and moving in tools; Tide Water Associated Oil Co. No. 1-A Derr, SE SE NW section 16-23-2w, cellar; Darby Petroleum Corp. No. 1 McCoy, SW cor. section 24-23-2w, wildcat, location; Midco Petroleum Corp. No. 1 Kern, NW SW NW section 27-23-2w, building rig.

Creek County

First reports of new activity in Creek County: Shibley Oil Co. and others No. 4 Campbell, SE NE NW NW section 13-17-7, drilling at 1,900 feet; Pure Oil Co. No. 16 Richard, SE NE SE section 4-17-7, spudded; Kissler Oil Co. No. 1-B Franklin, C N half NE NE section 29-18-9, rigging up machine; Bookout and others No. 2 Patrisic, SW SW SE section 12-19-9, rigging up machine; Tulsa Oil Co. and others No. 1 Patrisic, SE SE SW section 12-19-9, spudded to 75 feet; Gregg Sawyer No. 3 Jackson, NW NE SE section 14-19-9, location; same operator's No. 1 Adams, C E half NE NE section 23-19-9, rigging up machine; Curtis Oil Co. and others No. 1-A Smith, SW SW NE section 34-19-9, rigging up machine.

Tulsa County

Johnson Oil Refining Co. was rigging up machine at No. 1 Bazwell, SE SW SW section 31-19-10, new Tulsa County operation.

Logan County

Champlin Refining Co. No. 9 Pfeiffer, SE NW NW section 4-19-2w, was location for a new test in the Logan County sector of the Lucien field.

Texas County

Hagy, Harrington & Marsh No. 1 Peck, C NE section 6-1n-13ecm, wildcat in Texas County, was a location. Same operator's No. 1 Becker, C NE section 4-1n-13ecm, was a wildcat location.

Marshall County

H. R. Emmerson No. 1 Haynie, NW SE NE NE section 23-8s-3e, new test in Marshall County, was drilling at 61 feet.

Carter County

Sinclair Prairie Oil Co. No. 15 Richards, SE SE NW section 9-4s-3w, had sands at 855 and 1,056 feet, total depth 1,085 feet, was shot and pumped 151 bbls. of oil in the first 21 hours. It is in the Healdton field, Carter County.

Carter Oil Co. No. 4 Perkins, NW SE SE section 4-1s-3w, Carter County sector of the Tussy pool, had sand series from 2,340 feet, total depth 2,970 feet, and swabbed and flowed 292½ bbls. of oil in the first 21 hours.

W. G. Barnett Oil Co. No. 1 Lucas, SW SE NW section 14-1s-3w, was dry and abandoned at 2,615 feet, total depth.

Carlock & Dexter No. 1 Tillis, SW SW SE section 4-4s-3w, an old well, was deepened from 1,044 feet to 1,083 feet and was estimated good for 12 bbls. of oil daily, an increase of 3 bbls.

Magnolia Petroleum Co. No. 71 Richards, NE NE NW section 6-4s-3w, had sand series from 995 to 1,156 feet, total depth, and produced 49 bbls. of oil in the first 24 hours.

New work in Carter County: Samedan Oil Co. No.

UNCONDITIONAL GUARANTEE
If this Housing ever Breaks or Distorts we will replace it Free
THE RIDGE TOOL CO. ELYRIA, O.
RIGID
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It Practically
STOPS WRENCH REPAIRS

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You ought to have this RIGID Compound Leverage Wrench in every kit.

Makes one man as strong as 6 — pays for itself in salvaged fittings on the first teardown job.

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New nut housing. Locks Anchor firmly on rod. Rod cannot slip thru Anchor when being installed.

EVERSTICK ANCHORS...

Engineers appreciate Everstick features which assure safety, long life and ease of installation in any soil condition.

A complete line with 3 types of expanding Anchors and rigid types of Cone Anchors. All sizes and holding capacities. Write for Everstick literature including new folder on Rural Electrification Lines.

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The J & S Gas Mixing Valve

Made in all S.A.E. standard flange sizes. Also many special adaptors are available for use in conjunction with gasoline carburetor furnished with engine permitting the use of either gas or gasoline.

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16 Higgins A, SE NW NE section 7-2s-2w, derrick: same company's No. 17 Higgins A, NE NE NW section 7-2s-2w, location: Pure Oil Co. No. 33 Lowery, SE NW SE section 4-4s-3w, pits; same company's No. 23 Westheimer & Daube, SW NE SE section 9-4s-3w, pits.

Garvin County

The following new operations in Garvin County were reported: Texas Co. No. 7 Derdyn, NW NW NE section 17-1n-3w, an old well bottomed at 1,672 feet, rigging up machine to deepen; Cox & Hamon No. 3 Perry, NW SE SW section 32-1n-3w, derrick.

Stephens County

Helmerich & Payne No. 1 Wade B, NW NW SE section 12-1n-5w, in the new deep pay in the Doyle area, Stephens County, had first sand showing oil at 3,833 feet, total depth 3,866 feet. It flowed 480 bbls. of oil through casing and by heads in the first 24 hours, cutting 3 per cent water, with 1,000,000 feet of gas. It was completed, flowing 200 bbls. of oil daily. Gravity of the oil was 50 degrees.

L. A. Wilkins and associates No. 3 Robberson, SE NE NE section 15-2s-5w, was bottomed at 940 feet and pumped 3 bbls. of oil and 1 bbl. of water daily, completed.

George L. Pall and others No. 1 Woodward, SW SE NE section 14-2s-8w, was dry and abandoned at 2,107 feet, total depth.

Gulf Oil Corp. No. 12 Sims, SE SW NE SW section 13-2s-4w, was a machine.

Jefferson County

Bridwell Oil Co. No. 4 Seay, SW NW NE section 30-6s-5w, Spring-Oscar-Seay district, Jefferson County, had pay at 1,960-64 feet, total depth, and flowed 400 bbls. of oil and 400 bbls. of water daily.

First reports of new activity in Jefferson County: Farlyn Oil Co. No. 52 Seay, SE SE SW section 3-7s-5w, location; same operator's No. 53 Seay, SE SE SW section 3-7s-5w, location; Long-Yingling-Lauck No. 23 Seay, SW SW SW SE section 3-7s-5w, produced 146 bbls. of oil in 24 hours at 1,270 feet, total depth; same operator's No. 24 Seay, SW SW SE section 3-7s-5w, topped sand at 1,064 feet and was rigging up standard machine.

Kiowa County

H. L. Werrick and associates No. 1 Noske, SE SE NW section 1-6n-17w, wildcat in Kiowa County, was drilling at 440 feet in red shale.

Caddo County

Ohio Oil Co. No. 5 Marchand, NW SE NW section 2-5n-9w, Cement field, Caddo County, tested a hole full of water from broken sand and shale at 6,565-6,640 feet, and was dry and abandoned at 6,775 feet, total depth.

Eastern Fields

(Continued from Page 64)

Outside Deep Tests

In Jackson County, United Carbon Co. has made fast time in reaching 4,790 feet and 4,870 feet in the tests on the Elizabeth Ward Perkins farm in Washington district. Another week is expected to take these tests to the Corniferous lime.

In Wood County, Belmont Quadrangle Co. is drilling at 1,350 feet on the C. D. White farm in Wood district. Carnegie Natural Gas Co. is shut down for engine change in the test on the W. O. Caplinger farm, Tucker district, Wirt County.

SOUTHEAST OHIO

The best Ohio producer for the week was the test of the Pure Oil Co. on the D. M. Miller farm in section 10, Jackson Township, Knox County. It was completed at 3,195 feet in the Clinton sand and produced 216 bbls. the first day after shot. The top of the sand was at 3,159 feet.

In Hocking County, the Preston Oil Co. completed No. 1,644 on the Sunday Creek Coal Co. lease in section 6, Ward Township, in Clinton sand at 3,630 feet. It produced 40 bbls. the first day after shot.

In Wayne County, same company completed a test on the C. Sykes farm in section 15, Canaan Township. It was an old gas well deepened to the Clinton at 3,280 feet and it produced 70 bbls. the first day after shot.

In Licking County, Settles, Shannon and others completed a test on the P. F. Shannon farm in section 15, Mary Ann Township, in the Berea sand at 759 feet. It produced 8 bbls. the first day after shot and will make a 2-bbl. pumper.

In Columbiana County, the Natural Gas Co. of West Virginia in the deep test on the J. C. Workman farm a half mile west of the Margaret Jenkins Oriskany gas well in section 28, Madison Township, is now drilling 135 feet in the Corniferous lime.

West Texas Fields

(Continued from Page 69)

bbls. on pump. T. G. Nichols No. 3 Moore, 3,187-3,212 feet, shot, 419 bbls. on pump. Phillips Petroleum Co. No. 21 Cockrell, 3,005-51 feet, shot, 503 bbls. oil and 12 bbls. water on pump; No. 5 Jordan, 2,950-3,045 feet, shot, 102 bbls. on pump. Seaboard Oil Co. No. 1 Whittenburg, 2,661-2,760 feet, shot, 313 bbls. on pump. Stekoll Oil Producer No. 3-C Whittenburg, 2,940-3,050 feet, shot, 20 bbls. on pump. Timms-Robinson No. 6 Moore, 3,070-3,130 feet, shot, 528 bbls. on pump. Turman and Plains No. 13-A Whittenburg, 2,892-2,935 feet, shot, 800 bbls. on pump.

Moore County

Shamrock Oil & Gas Co. No. 1 Jones, 3,519 feet, plugged back to 3,280 feet, acidized, 28,600,000 feet gas; No. 6 Sneed, 2,380-2,920 feet, 81,100,000 feet gas.

Wheeler County

Elbar Corp. No. 11 Noel, 2,350-2,454 feet, plugged back to 2,390 feet, shot, 85 bbls. on pump. Robinson and others No. 1 Morgan, dry and abandoned 4,014 feet.

WEST TEXAS COMPLETIONS

Andrews County

Humble Oil & Refining Co. No. 10 Menas, 4,500-35 feet, 642 bbls. on pump after acid. Sinclair Prairie Oil Co. No. 2 Emma Cowden, 4,207-92 feet, 11 bbls. oil and 8 bbls. water after shot.

Crane County

Hix & Co. No. 4 Hughes, 2,033-85 feet, acidized, 913 bbls. on pump. Texas Co. No. 1-A University, 3,538-85 feet, shot, 476 bbls.

Crockett County

Superior Oil Co. of California No. 1 Todd Estate, dry and abandoned at 7,948 feet, top Simpson 7,131 feet, Ellenberger 7,424 feet, elevation 2,537 feet.

Ector County

Amerada Petroleum Corp. No. 3 Holt, 4,161-4,295 feet, shot, 510 bbls. Atlantic Refining Co. No. 4-D Cummins, 4,150-4,274 feet, shot and acidized, 143 bbls. Barnsdall Oil Co. No. 3 Foster, 4,030-4,183 feet, shot, 476 bbls. on pump. Empire Oil & Refining Co. No. 1 University, dry and abandoned 3,783 feet, elevation 2,867 feet. Continental Oil Co. No. B-35-2 Rumsey, 4,170-4,275 feet, shot and acidized, 540 bbls. Devonian Oil Co. No. 2 Blakeney, 4,130-4,218 feet, shot, 520 bbls. W. H. Dunning, Jr., No. 5-A Scharbauer, 4,172-4,232 feet, acidized, 2,032 bbls. Landreth and Llano Oil Co. No. 4 Holt, 4,287-4,310 feet, shot, 550 bbls. Mabee & Blockstock No. 4 Cummins, 4,260 feet, acidized, 791 bbls. M. B. K. Drilling Co. No. 1 Foster, 4,065-4,194 feet, shot, 703 bbls. Phillips and Pure Oil Co. No. 2 Jessie Cowden, 4,321 feet, plugged back to 4,050 feet, temporarily abandoned; No. 13 Cowden, 4,082-4,162 feet, acidized, 5,033 bbls. Stanolind Oil & Gas Co. No. 51 J. M. Cowden, 4,155-4,291 feet, acidized and shot, 1,362 bbls. Texas Pacific Coal & Oil Co. No. 6 Scharbauer, 4,170-4,230 feet, shot and acidized, 2,480 bbls. American Americabo Oil Co. No. 3-B Settles, 2,380-2,524 feet, acidized, 140 bbls. in 12 hours on pump.

Howard County

Moore Brothers Corp. No. 1 Cauble, 3,303 feet, dry and abandoned, elevation 2,517 feet. Sinclair Prairie Oil Co. No. 5 Texas Land & Mortgage Co., 2,628-2,820 feet, shot, 498 bbls.

Loving County

Stanolind Oil & Gas Co. No. 2 Kyle, dry and abandoned 4,124 feet, elevation 3,080 feet. Woodley Petroleum Co. No. 1 T. P. Land Trust, junked and abandoned 3,461 feet.

Pecos County

Adams and others No. 6 Masterson, 1,208-1,493 feet, shot, 130 bbls. on pump. Adams & Montague No. 1 Shell-Eaton, 1,580-1,672 feet, plugged back to 1,625 feet, shot, 10 bbls. on pump. Cardinal Oil Co. No. 14-A Smith, 332-55 feet, 57 bbls. on pump. Paul Childress, trustee, No. 19 Smith, dry and abandoned 398 feet. E. P. Cravens No. 1 Netterville, 2,190-2,332 feet, shot, 185 bbls. C. W. Fowler and others No. 1 Amerada-Potts, 2,278-2,331 feet, shot, 294 bbls. Ohio Oil Co. No. 5-F Yates, 1,315-1,404 feet, 727 bbls.; No. 17-H Yates, 1,590-1,760 feet, 2,468 bbls. Phillips Petroleum Co. No. 1 Grierson, 3,007 feet, elevation 2,939 feet, dry and abandoned. G. J. Smith No. 1 Smith, dry and abandoned 2,692 feet. Tex-Mex Petroleum Co. No. 5 Netterville, 2,200-2,316 feet, shot, 200 bbls.

Upton County

Brown-Hancock Oil Co. No. 2-C Baker, 2,265-2,341 feet, acidized, 932 bbls. Cardinal Oil Co. No. 4 Starnes-Fowler, 2,244-2,380 feet, acidized, 304 bbls. on pump. Gulf Oil Corp. No. 6-B Hughes, 2,168-2,269 feet, acidized, 388 bbls. fluid, 69 per cent water, on pump. Sergeant and others No. 2 Elder, 2,193-2,202 feet, acidized, 904 bbls. on pump.

Ward County

Gulf Oil Corp. No. 83 Hutchins, 2,520-2,750 feet, shot, 1,233 bbls.; No. 85 O'Brien, 2,538-2,774 feet, shot, 461 bbls. Hanna & Case No. 2 White, 2,503-15 feet, shot, 30 bbls. Standard Oil Co. of Texas No. 16-37 McFarland, 2,500-2,670 feet, shot, 347 bbls. Tex-Mex Petroleum Co. No. 10 Pure-Smith, 2,358-2,465 feet, shot, 300 bbls. Tide Water Associated No. 38 Johnson, 2,908-3,016 feet, shot, 950 bbls.

Winkler County

Falcon Oil Co. No. 7 McCutcheon, 3,270-3,372 feet, shot, 216 bbls. Gulf Oil Corp. No. 13 Clapp, 3,025-3,110 feet, shot, 654 bbls.; No. 54 Daugherty, 2,812-3,146 feet, shot, 546 bbls.; No. 56 Daugherty, 2,810-3,020 feet, shot, 906 bbls. Herbert Oil Co. No. 4 Hendricks, 2,780-3,155 feet, shot, 611 bbls. J. R. Sharp No. 3 McCutcheon, 3,250-3,438 feet, shot and acidized, 168 bbls. Skelly Oil Co. No. 1-B Daugherty, 3,031-41 feet, 36 bbls.

NORTH TEXAS COMPLETIONS

Archer County

Texas Co. No. 1 W. H. Portwood A, 1,468 feet, dry. Underwood Drilling Co. No. 18 Campbell B, 991 feet, dry; No. 19 Campbell B, 976 feet, dry.

Clay County

Walter Gant No. 4 C. M. Wosham, 3,916-32 feet, 1,250 bbls.

Cooke County

Bridwell Oil Co. No. 4 J. R. Parkey, 730 feet, dry. F. W. Merrick No. 1 Redman, 1,654 feet, dry.

Denton County

Gainesville Refining Co. No. 1 Gibson, 1,645-53 feet, 20 bbls.

Montague County

Bridwell Oil Co. No. 1 Mrs. L. J. Cunningham D, 1,156-65 feet, 15 bbls. Lesh & McCall No. 1 Hinton, 841 feet, dry.

Wichita County

Deep Oil Development Co. No. 13 Munger A, 3,723-3,878 feet, 700 bbls. W. T. Hoppes No. 3 Munger, 1,092-93 feet, 25 bbls. King Oil Co. No. 8 Stone A, 1,638-42 feet, 10 bbls. H. G. Mitchell No. 2 Fassett, 685 feet, dry. Pois & Schulz No. 1 Foster H, 2,102 feet, dry.

Wilbarger County

King Oil Co. No. 8 Waggoner Q, 1,900 feet, dry. George M. Shanor No. 1 Waggoner, 1,099-1,113 feet, 35 bbls.

Young County

S. S. Alexander No. 1 W. L. Boyd, 871 feet, dry. Underwood Drilling Co. No. 27 Campbell C, 886-98 feet, 40 bbls.; No. 28 Campbell C, 952 feet, dry; No. 29 Campbell C, 919 feet, dry; No. 1 F. V. Hinson, 1,448 feet, dry. D. L. Wolf No. 2 J. H. Wilson, 1,105 feet, dry. Worth Oil Co. No. 3 Hall, 742 feet, dry.

North Louisiana, Arkansas

RODESSA'S 4-COUNTY FIELD NEARING 100,000-BBL. MARK

By
MITCHELL TUCKER

SHREVEPORT, La., Aug. 30.—Daily average production of the Rodessa field is rapidly approaching the 100,000-bbl. mark, as it continues to expand in four counties and three states. For the past seven-day period production averaged 92,563 bbls. per day. The rapid development of the Arkansas extension to that field, where no proration restriction has been invoked, promises to quickly boost the daily field withdrawal.

Estimated Daily Production

Estimated daily gross production all companies week ending August 27, 1937:

NORTH LOUISIANA

Bellevue	745
Caddo light	3,960
Caddo heavy	2,720
Converse	715
Cotton Valley heavy	130
Cotton Valley light	*3,300
De Soto and Red River	1,530
Elm Grove	375
Haynesville	3,000
Holly	120
Homer	2,455
Lisbon	13,425
Pleasant Hill	120
Rodessa	51,125
Sarepta-Carterville	310
Sligo	495
Sugar Creek	395
Urania	2,765
Zwolle	740
Total	88,425

SOUTH ARKANSAS

Rodessa	2,510
Champagnolle	1,350
El Dorado	1,975
Lisbon	280
Miller County miscellaneous	465
Nevada	755
Schuler	6,590
Smackover light	2,125
Smackover heavy	17,165
Stephens	595
Troy	570
Urbana	1,210
Total	35,590

Texas side of Rodessa field, 38,930 bbls. daily.
*2,850 bbls. is distillate.

RODESSA—ARKANSAS

Two completions were made in Miller County, Arkansas, portion of Rodessa, each having good initial production and each logging what is considered to be a good thickness of saturated sand. Five other wells were in the process of completion as the week closed. Nine other wells are either drilling or rigging up in the territory.

Anding & Bird No. 1 B. A. Skipper, SW NW SW section 11-20-28, one-half mile north of W. L. McClanahan's discovery extension well, flowed at the rate of 40 bbls. hourly through one-quarter inch tubing choke on initial test, tubing pressure 400 pounds. Saturated Mitchell sand was drilled from 6,047 to 6,054 feet and saturated Lower Gloyd from 6,064 to 6,075 feet, or a total of 18 feet of sand. Total depth is 6,075 feet.

Roberts Brothers Drilling Co. No. 1 W. W. Capps, SE NW SE section 10-20-28, drilled the saturated Mitchell from 6,084 to 6,092 feet and saturated Gloyd from 6,011 to 6,019 feet, flowing at the rate of 35 bbls. per hour through various size chokes, total depth 6,121 feet.

RODESSA—LOUISIANA

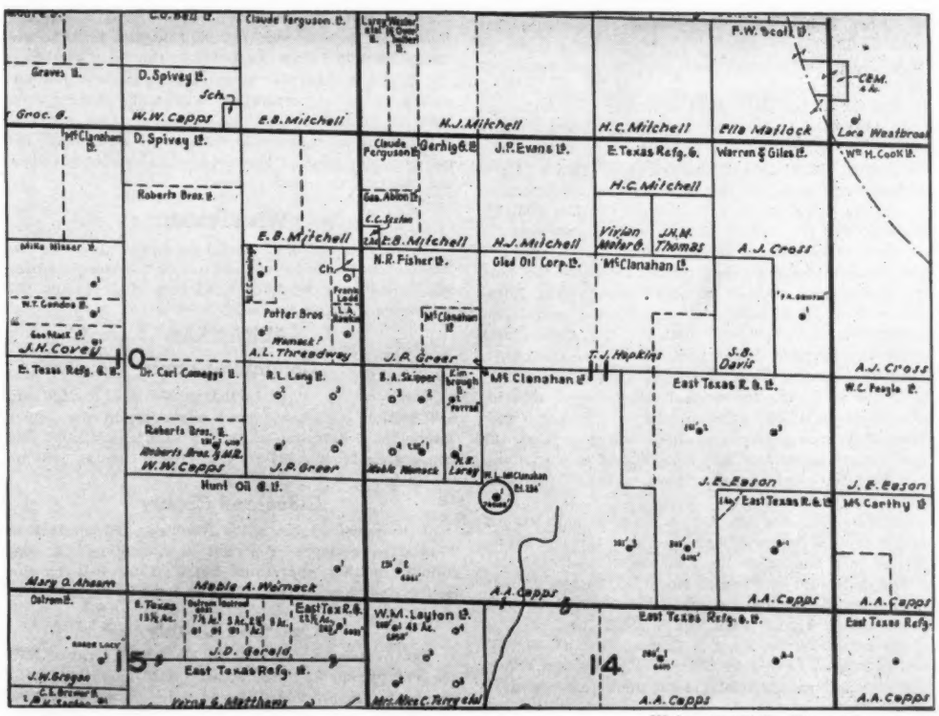
R. W. Norton No. 1 Payne, SE SE section 27-23-16, deep exploratory test of the Rodessa fault feature near its southern peak, has been plugged back to the Lower Glen Rose gas zone and completed as a 19,000,000-foot gasser, 1,600 pounds rock pressure, present total depth 5,980 feet. This well has been drilled to a total depth of 11,486 feet, or 11 feet into the Permian salt, and was the deepest hole ever drilled in North Louisiana. It required 10 months to drill and test this well.

Magnolia Petroleum Co. No. 1 D, F. Barr, NW S half section 29-23-16, flowed 10 bbls. hourly through one-quarter inch tubing choke, total depth 6,060 feet.

Roberts Brothers Drilling Co. No. 1 E. G. Finley, NW cor. section 1-23-16, flowed 198 bbls. in 14 hours, total depth 6,050 feet.

Standard Oil Co. No. 1 McCoy, section 10-23-16, flowed 48 bbls. per hour through one-half inch tubing choke, total depth 5,974 feet.

Same company's No. 2 McCoy, same section, flowed at the rate of 50 bbls. hourly on initial test through one-half inch tubing choke, total depth 5,964 feet.



Walter E. Wylie, Maps, Shreveport

Active extension area of the Rodessa field in Miller County, Arkansas, where seven completions have been made, five others in the process of completing, and nine drilling. Circled well indicates discovery extension location.

RODESSA—TEXAS

Cass County

United Production Co. No. 1 Baugus Unit, Cass County School Land Survey, flowed 374 bbls. in 24 hours, one-quarter inch tubing choke, total depth 6,018 feet.

United Production Co. No. 3 V. Bivens, J. Collom Survey, flowed 64 bbls. in 24 hours through one-half inch tubing choke, tubing pressure 300 pounds, casing pressure 825 pounds, total depth 6,064 feet. Location is along the northern flank of the Mitchell and Gloyd sand area.

The same company's No. 4 V. Bivens, same survey, found only 1 foot of sparcely porous and saturated sand from 5,981 to 5,982 feet, and has been abandoned, total depth 6,025 feet.

Marion County

About one-half mile northeast of production in the Lodi sector, Arkansas-Louisiana Gas Co. No. 1 Emma Ford, A. D. S. Coy Survey, is being tested, flowing at the rate of from 25 to 35 bbls. hourly through one-quarter inch tubing choke, total depth 6,097 feet.

Two miles northeast of Lodi production, and about 5 miles southwest of Rodessa production, Arkansas-Louisiana Gas Co. No. 1 J. P. Fant, L. P. Cadenhead Survey, showed salt water only, after setting 7-inch casing at 6,128 feet to test saturated sections from 6,178-83 and 6,183-88 feet. A squeeze job is now being placed on the lower part of the hole, preparatory to testing upper possible levels.

Gulf Oil Corp. No. 1 Henderson, R. Bennington Survey, deepest of the three wells being drilled as offsets to the 12-mile extension discovery well, southwest along the Rodessa fault system and 2 miles north of Jefferson, Tex., is nearing the testing stage. Ten feet of the Henderson sand, showing gas and distillate was cut from 6,014 to 6,034 feet. In as much as this well is checking about 30 feet lower than the discovery well, which was a prolific gas producer in this zone, considerable hope is held that the Gulf offset will be an oil producer.

LOUISIANA

Bienville Parish

DeSoto Oil & Gas Co. No. 1 Ashley, SW SE section 15-16-10, second well to be drilled in the Lake Bisteneau gas field, was perforated with 50 shots from 5,100 to 5,190 feet in the Lower Glen Rose, and tested 10,000,000 feet of wet gas after acidizing, total depth 5,625 feet. Additional acid will be applied.

Lide and Greer No. 2 Davis, NW NE section 12-16-5, upon the northeastern flank of the Union Church gas-distillate field opened about one year ago, found the

Upper Travis Peak beds to carry salt water only, and has been abandoned at a total depth of 7,355 feet. No. 2 Davis is an offset to No. 1, completed as a 75,000,000-foot wet gas well in the Lower Glen Rose, which section was also dry in No. 2 well.

Bossier Parish

Arkansas-Louisiana Gas Co. No. 2 T. Wilson, NW SW section 8-17-11, in the gas producing area of the Sligo field, gauged 29,413,000 feet of wet gas, rock pressure 2,190 pounds, total depth 5,120 feet.

Caddo Parish

Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, closely watched wildcat near Caspiana, is coring ahead in the Lower Marine beds below 8,740 feet, after reported logging of some sand carrying an oil and gas odor.

In the Pine Island field, Stanolind Oil & Gas Co. No. 124 Dillon, NW SE section 14-21-15, pumped 57 bbls. daily after a 2,000-gallon charge from the Annon chalk, total depth 1,699 feet.

In the old Dixie field just north of Shreveport, R. G. Trippett and D. C. R. Co. No. 3 Caddo School Board, flowed by heads at the rate of 200 bbls. daily, total depth 2,460 feet.

Claiborne Parish—Lisbon

Following the completion of five good producers at Lisbon last week, bringing total oil wells in that field to 83, a new daily average production peak of 13,425 bbls., was established for the past seven-day period.

The September daily field allowable for Lisbon has been placed at 13,750 bbls. by the Louisiana Department of Conservation, an increase from 12,000 bbls. for August. Allocation of this figure is upon a 75 per cent acreage basis, 25 per cent bottom-hole pressure.

Derrick for testing of Lisbon Oil Co. No. 1 J. W. Burgess, SE NE section 3-20-1, which was recently temporarily abandoned at 5,800 feet, has been built and preparations are being made to reenter the hole and test several oil and gas showings reported. Location is about 2½ miles southwest of Lisbon production.

Situated about midway between the Lisbon and Sugar Creek fields, Shreveport Oil & Gas Co. (J. R. Bevill and others) No. 1 Edwards, NE section 16-20-5, continues to test after several applications of acid, totaling about 12,000 gallons. The well makes a few flows after each acid charge, and then goes dead. Oil level cannot be lowered below 2,300 feet by swabbing, it is reported, and operators plan to install pumping front to produce the well.

Atlantic Refining Co. No. 3 King, E half SE SE section 35-21-5, flowed 59 bbls. per hour through three-quarter inch tubing choke, total depth 5,267 feet.

Hollifield and McFarland No. 3 M. Patton, E half NW SE section 31-21-4, flowed 86 bbls. hourly through 1-inch tubing choke, total depth 5,293 feet.

Olson Drilling Co. No. 1 J. T. Bean, S half NW NW section 32-21-4, flowed 64 bbls. hourly through three-quarters inch tubing choke, total depth 5,166 feet.

Sells Production Co. No. 1 J. Bean, W half SW NW section 32-21-4, flowed 28 bbls. hourly, total depth 5,195 feet.

Standard Oil Co. of Louisiana No. 3 F. B. King, NE NW SE section 35-21-5, flowed 40 bbls. hourly through one-half inch tubing choke, total depth 5,300 feet.

Claiborne Parish—Sugar Creek

Sugar Creek Syndicate No. 2 Brownfield, section 5-19-5, on the northern flank of the Sugar Creek field in the oil producing area, has cored 8 feet of saturated Travis Peak, and 7-inch casing has been set prior to testing. Total depth is 5,730 feet.

The same operators are pulling liner preparatory to deepening their No. 1 Stevens, SE section 6-19-5, to the Travis Peak oil sand from its present level of 4,323 feet in the gas bearing horizon of Lower Glen Rose.

DeSoto Parish

Pullman Oil Co. No. 3 Ramsey, SE NE NW section 36-11-11, in the recently opened Grogan oil field, missed the oil saturation entirely, and has been completed as a 2,000,000-foot gasser, total depth 2,942 feet.

Arthur D. Robinson No. 1 Allison, NW section 17-14-13, has been abandoned as dry, total depth 3,002 feet.

LaSalle Parish

Along the flank of the Urania field, Petroleum Heat & Power Corp. No. 1 Gahaian, SW NW section 25-10-1e, pumped 5 bbls. daily on completion test, total depth 1,513 feet.

Placid Oil Co. No. 4 Louisiana Central Lumber Co., SW section 15-10n-3e, Urania field, found the Wilcox sand from 1,808 to 1,814 feet dry, and has been abandoned.

Lincoln Parish

T. L. James No. 1 J. J. Spence, SW NE section 11-17-4, three-quarters mile east of the three gas-distillate producers in the Montcalm area, failed to pick up the Fowler sand expected at about 5,300 feet. Drilling is being continued at 5,465 feet for exploration of the Upper Travis Peak beds.

Sabine Parish

Kirk-Green-Way, Inc. No. 1 Whitney Corp., NW NE section 8-9-13, deep exploratory test along the northern flank of the shallow Converse oil field, has been abandoned. After drilling to a total depth of 8,510 feet, all possible sections were perforated and tested before abandonment. Last effort to make a producer here was made by perforating the casing from 2,985 to 3,000 feet in the old Converse producing level, but only salt water was obtained.

Webster Parish

Standard Oil Co. of Louisiana No. 1 E. L. Stewart, SE section 32-21-10, deep exploratory well 2 miles southwest from gas-distillate production in the main part of the field from the 8,100-foot Bodcaw sand, is still testing. The Bodcaw was reported logged in this well about 400 feet below the point in the main section of the field, but yet it was carrying both gas and distillate saturation. After perforating twice, and swabbing down without obtaining any shows, preparations are now being made to reperforate with larger size shots. Oil, gas or water has not appeared while swabbing following the first two perforations.

Winn Parish

G. W. Zeigen No. 11 Louisiana Central Lumber Co., NW section 11-13n-1e, wildcat test of the area, has been abandoned at a depth of 1,769 feet after finding the Wilcox sand dry.

ARKANSAS

Columbia County

Standard Oil Co. of Louisiana No. 1 J. P. McKean, SW section 8-16s-22w, cored a section in the Upper Travis Peak carrying saturation of heavy asphalt-like appearance from 4,807 to 4,826 feet. Drilling will be continued.

Cleveland County

J. R. Lockhart No. 1 Ida Robinson, SE SE section 36-10s-11w, formerly reported as abandoned, is continuing drilling operations below 3,500 feet in the Oolitic lime, having the 4,500-foot level as its objective.

Ouachita County

Tide Water Seaboard Oil Co. No. 1 S. A. Graves, NW SE NW section 33-13-18, wildcat test upon their geophysically mapped block, found only salt water in the Permian lime based at 4,047 feet. Drilling continues at 4,290 feet for exploratory purposes.

Pike County

Bruce E. Wallace and others No. 1 Tilyew, SE SE SE section 26-8-24, has been abandoned as dry at a total depth of 610 feet.

Union County—Schuler

Two new completions were made at Schuler last week, bringing total producers to 15, which registered a daily average production last week of 6,590 bbls. The two exploratory holes being drilled here, one by Lion Oil Refining Co. and the other by E. M. Jones and others, are being watched as they carefully core and log all possible producing sections from the present level to their objective in the Permian lime, expected at about 7,500 feet.

Alice Sydney Oil Co. No. 2 Morgan, section 18-18-17, flowed 545 bbls. daily through one-half inch tubing choke from perforations 5,866 to 5,888 feet, total depth 5,888 feet.

Phillips Petroleum Co. No. 2 E. Rosen, SE SW NE section 18-18-17, flowed 221 bbls. daily through one-quarter inch tubing choke, tubing pressure 147 pounds, casing pressure 650 pounds, total depth 6,058 feet.

EAST TEXAS (Border Counties)

Harrison County

J. B. Bond and others No. 1 Bailey and Martin, Martin Survey, is drilling in the Paluxy sand below 3,700 feet. A Lower Trinity test is planned here.

Panola County

Magnolia Petroleum Co.'s proposed Lower Marine test in its recently opened gas-distillate field in the Thomas Applewhite Survey of Panola County, No. 2 Hull, is drilling below 7,900 feet is what is presumed to be beds of the Lower Travis Peak.

MISSISSIPPI

Lamar County

Sun Oil Co. No. 3 Talley, NW section 33-4n-15w, fourth test on the salt dome discovered recently in southern Lamar County, drilled into the caprock or salt at 6,200 feet, and is now coring at about 6,280 feet, expecting the anhydrite at any time. A fifth location is expected on this salt dome, where the dead asphalt showings were recently drilled in No. 3 Talley, and created quite a flurry.

Madison County

Sun Oil Co. No. 1 Wilson, section 1-8n-2w, has been abandoned at 5,035 feet in the base of the chalk, showing only salt water. Location was on the flank of the Jackson anticline, and checked over 1,200 feet low as compared with an earlier test drilled in section 24-7n-1w, Hinds County.

Southwest Texas Fields

(Continued from Page 65)

test at 6,727-41 feet. The test is located on a 60-acre tract in Survey 311, about 1,500 feet east of present production in the 6,700-foot sand. Wells were completed in four sands ranging from the Clarkwood sand at 4,100 feet to the deepest Frio at 6,900 feet. The latter horizon is seeing considerable development at present, and four of the eight wells completed this week were bottomed in that sand.

Elsewhere in Nueces County, several oil wells are in process of completion. Flour Bluff has three tests cleaning into pits, with two other completions during the week. The Luby field, southwest of Corpus Christi, gained its second producer during the week, when Stanolind Oil & Gas Co. brought in No. 1 McCann, extending production slightly to the south.

In San Patricio and Aransas counties to the north and east of Corpus Christi, several fields are active, among them, Midway which is seeing consistent development and already has much undrilled but proven acreage.

New lime production was brought in in the Fault Line during the week, with completion of the Lanning & Coffield No. 1 Withers. Located southwest of the Branyon field in Caldwell County, and north of the Brinkley production on the Trammel tract, the No. 1 Withers came in flowing 91 bbls. per day of oil, together with 223 bbls. of water. The well is bottomed at 2,253 feet in the base of the Edwards.

The prospective new field in Bastrop County, lying northeast of Caldwell County, is not yet brought in. The discovery well, Hantho-Nelson No. 1 Litton, 2½ miles east of Cedar Creek, is recompleting at total depth of 2,117 feet.

New York-Pennsylvania Fields

(Continued from Page 76)

moved in for two others. Hanley & Bird are drilling at 2,910 feet on the Moyer farm; G. L. Cabot, Inc., at 3,389 feet on the Carrie Calkins farm; Becker, at 3,450 feet on the C. Calkins farm; Sylvania Corp., at 1,960 feet on the H. Hand farm; Clancy and others, at 2,865 feet on the Bates 1-A farm; Sylvania Corp., at 660 feet on the A. H. Tuttle farm, and Godfrey L. Cabot, Inc., at 226 feet on the R. C. Towsley farm. Belmont Quadrangle Drilling Co. is moving in material on the L. S. Johnson farm and the Williamsport Oil & Gas Co. on the Della Lampson farm.

The Southwestern Development Co. is drilling out cement at 4,554 feet on the Federal Land Bank farm, Dix Township, Schuyler County, and is deepening its test on the Shearer farm, Dix Township, same county, after finding the Oriskany unproductive. This second test topped the Onondaga at 2,220 feet and found the Oriskany sand at 2,284-97 feet.

Fairman and others are drilling at 3,260 feet on the C. Wilson farm, willing Township, and Godfrey L. Cabot, Inc., is drilling at 164 feet on the Thomas Murphy farm, Alma Township, both in the State Line field area of Allegany county.

Rocky Mountain Area

TWO EAST SIDE WILDCATS IN COLORADO NEAR THE FINISH

By
T. R. INGRAM

DENVER, Colo., Aug. 30. — Eastern Colorado wildcats are attracting attention with two of them at critical depths and a third ready to start. Gulf Oil Corp. will drill on west side of the Sierra Grande arch, in Lincoln County.

Texas Co. completed a 400-bbl. well on the Oregon Basin dome in Wyoming. Several Lance Creek wells to the Minnelusa are at interesting depths.

Cut Bank field in Montana had four completions, of which one was a dry hole and 10 active operations. The Kevin-Sunburst field had five completions, two of which were dry, and two new operations.

NEW MEXICO

J. W. Brown and others No. 1 State, C SW SW section 22-21-34, wildcat 9 miles west of the Eunice field, Lea County, was abandoned after salt water intruded at 4,134-44 feet, total depth. It ran high structurally compared with other tests drilled in the area, but failed to find oil or gas showings.

The Monument pool was extended one location northward at Gulf Oil Corp. No. 1-D Kutter-State, C SW SW section 8-19-37. It flowed 240 bbls. of oil through tubing in six hours after acidizing. Top of pay was 3,980 feet, total depth 4,040 feet. Gas volume was 1,572,000 feet.

Continental Oil Co. No. 2-A-14 Sanderson, NE NW NE section 14-20-36, on the west edge of the Monument pool, had lime pay at 3,777-3,875 feet, total depth, was acidized and flowed at the rate of 41 bbls. of oil an hour.

Continental Oil Co. No. 1-B-30 Lockhart, C SE SW section 30-21-36, was bottomed at 4,101 feet, plugged back to 3,936 feet, flowed 60 bbls. of oil daily and produced 5,780,000 feet of gas.

Ohio Oil Co. No. 3 State-Hansen, C W half NE NE section 16-20-37, had initial production of 1,500 bbls. of oil at total depth of 3,887 feet, plugged back to 3,871 feet.

Repollo Oil Co. No. 1 White, SE cor. section 24-20-36, was acidized two times and flowed 180 bbls. of oil in 12 hours, at 3,861 feet, total depth.

Texas Co. No. 13 Lieu Lands, C SE SW section 19-20-37, was acidized at 3,735-3,870 feet, total depth, in lime and flowed 19 bbls. of oil hourly.

Texas Pacific Coal & Oil Co. No. 4-A State, C SW SW section 9-22-36, was bottomed at 3,878 feet, plugged back to 3,877 feet and flowed 80 bbls. of oil daily.

Bert Fields and others No. 3 Turner-State, SW SE NW section 32-20-37, was bottomed at 3,843 feet and had initial production of 500 bbls. of oil daily.

Important wildcat tests were announced in Lea and Chaves counties. Crandall, Osmond & Maxwell No. 1 Maxwell, C SE SE section 2-11-36, 4 miles southeast of Ranger Lake in northern Lea County, was a location. Mathewson and others No. 1 McDonald, 660 feet from the north and 1,980 feet from the west line of section 19-15-27, 14 miles northeast of Artesia in Chaves County was bottomed at 102 feet in red beds and gypsum shells.

Lea County

Amerada Pet. Corp. No. 6 Byrd, SE sec. 12-20-36. Loc.
Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. Drlg. 3,910 ft.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-25-37. Drlg. 3,575 ft.
Anderson-Prichard Oil Corp. No. 1 Gregory, NW sec. 33-25-37. T.D. 2,355 ft.; set 9⅝-in. csg.
Anderson-Prichard Oil Corp. No. 2 Langlie, SE sec. 8-25-37. Drlg. 3,466 ft.; testing.
Anderson-Prichard Oil Corp. No. 1 Lanehart, SW sec. 21-25-37. T.D. 2,903 ft.; fishing.
Atlantic Ref. Co. No. 2-P State, C NE NW sec. 25-20-36. T.D. 1,154 ft.; set 7⅝-in. csg.
E. G. Bradley No. 1 Lanehart, C SW NE sec. 28-25-37. T.D. 3,130 ft.; running 5½-in. csg.
Bradley Oil Co. No. 1 Grizzell, C SW NE sec. 5-22-37. Loc.
Cities Service Oil Co. No. 1-H State, C NE NE sec. 17-22-36. Drlg. 1,495 ft.
Continental Oil Co. No. 7 Britt, C SW SE sec. 18-20-37. Drlg. 3,017 ft.
Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat; P.B. from 3,860 ft. to 3,672 ft.; cleaning out.
Continental Oil Co. No. 2-A-15 Elliott, SE sec. 15-22-37. T.D. 3,435 ft.; set 7-in. csg.
Continental Oil Co. No. 1 Hawk, SE sec. 5-21-37. Drlg. 3,605 ft.
Continental Oil Co. No. 1 Jack, C NW NE sec. 27-34-37. T.D. 3,075 ft.; set 7-in. csg.
Continental Oil Co. No. 1-A-30 Lockhart, NW sec. 30-21-36. Rigging up rotary.
Continental Oil Co. No. 2-B-31 Lockhart, C SE SW sec. 31-21-36. T.D. 3,650 ft.; mixing mud.
Continental Oil Co. No. 6 Lockhart, NE SE NW sec. 30-21-36. T.D. 294 ft.; set 10¾-in. csg. at 286 ft.
Continental Oil Co. No. 6-A-11 Sanderson, NE SW SW sec. 11-20-36. T.D. 275 ft.; set 10¾-in. csg. at 265 ft.
Continental Oil Co. No. 1-E-17 State, C SE SE sec. 17-22-36. T.D. 3,842 ft.; tested 5 B.O. in 2½ hrs.
Continental Oil Co. No. 5-A-17 State, C SW NE sec. 17-19-37. Drlg. 3,885 ft.
Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. T.D. 4,210 ft.; S.D.O.
Culbertson & Irwin No. 2 Moseley, NE NW SW sec. 34-24-37. Drlg. 1,340 ft.
Emperor Oil Co. No. 1 Johns, C SW NW sec. 24-17-32. T.D. 710 ft.; lowering csg.
Empire Oil & Ref. Co. and Repollo Oil Co. No. 2 Brunson, NW sec. 3-22-37. Drlg. 1,980 ft.
Empire Oil & Ref. Co. No. 1 Parsons, C SE SE sec. 27-19-36. T.D. 4,002 ft.; flowed 94 B.O. daily; shut in.
Empire Oil & Ref. Co. No. 1-G State, sec. 2-21-36. T.D. 3,900 ft.; shut down.
Empire Oil & Ref. Co. No. 2-G State, C SE SW sec. 2-21-37. Drlg. 3,850 ft.
J. E. Farrell No. 2-B Walden, C NE SW sec. 15-22-37. Drlg. 3,680 ft.
J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,665 ft.
Gulf Oil Corp. No. 2 Baker, SE sec. 5-22-37. T.D. 3,530 ft.; set 6-in. at 3,529 ft.
Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; testing.
Gulf Oil Corp. No. 2 Cole, C NE NE sec. 16-22-37. T.D. 1,141 ft.; shut down.
Gulf Oil Corp. No. 3 Cole, C SE NE sec. 16-22-37. Derrick.
Gulf Oil Corp. No. 1 Elliott, SW SE SE sec. 15-25-37. Drlg. 3,380 ft.
Gulf Oil Corp. No. 1 Mattern G, C NE SE sec. 18-21-37. Drlg. 2,300 ft.
Gulf Oil Corp. No. 1 Monda, C SE SW sec. 21-22-37. T.D. 3,670 ft.; flowed 27½ B.O. in 24 hrs.
Gulf Oil Corp. No. 2 Reeves, C SE NW sec. 29-20-37. T.D. 3,840 ft.; testing.
Gulf Oil Corp. No. 1 Stebbins, C SE NW sec. 5-22-37. T.D. 1,193 ft.; set 8⅝-in. at 1,169 ft.
Gulf Oil Corp. No. 1 Stitcher, C SE SW sec. 4-22-37. Drlg. 2,601 ft.
Gulf Oil Corp. No. 1-B White, SE sec. 35-20-36. Derrick.
Herschback Drlg. Co. No. 1 Crutchfield, SW SE NE sec. 32-19-37. T.D. 3,765 ft.; running casing.
Homestead No. 1 Clifford, SW sec. 12-26-32. Wildcat; drlg. 2,100 ft.
Humble O. & R. Co. No. 1 Fopeano, C SE SW sec. 25-20-36. Drlg. 3,185 ft.
Humble O. & R. Co. No. 2 Saunders, C NW NW sec. 9-22-34. Drlg. 2,100 ft.
Humble O. & R. Co. No. 2 Williams, C SE NW sec. 34-24-37. Drlg. 3,365 ft.
Jal Nat. Gas Corp. No. 2 Justis, NE sec. 20-25-37. T.D. 3,029 ft.; testing.
Landreth Prod. Co. No. 4 Grizzell, C SW SW sec. 5-22-37. Drlg. 2,600 ft.
George Livermore No. 1 Bordages, NW cor. sec. 33-19-37. T.D. 275 ft.; set 1½-in. csg. at 148 ft.
Mack & Stauffer No. 2 Grizzell, C NE NE sec. 8-22-37. Drlg. 1,850 ft.
Magnolia Pet. Co. No. 4 Cary, C SW SW sec. 29-21-37. Drlg. 3,474 ft.
Magnolia Pet. Co. No. 1 Hardy, SW SW NW sec. 29-21-37. Drlg. 3,474 ft.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 34-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.
Magnolia Pet. Co. No. 2 State-Bridges, sec. 14-17-34. Drlg. 3,415 ft.
J. A. Mascho No. 1 Cloyd, C SE SE sec. 20-22-33. Wildcat; derrick.
McDonald & Weiner No. 1 Elliott, SE cor. sec. 19-21-37. Drlg. 1,500 ft.
Mid-Continent Pet. Corp. No. 4 Greer, C SW NW sec. 21-22-36. R.U.R.
Mid-Continent Pet. Corp. No. 1 Owen, C NW NW sec. 3-22-37. T.D. 3,737 ft.; to put on pump.
Murray et al No. 4 State Wallace, NW SW NW sec. 3-21-36. T.D. 3,840 ft.; shot and cleaning out.
National Drlg. & Prod. Co. No. 1 Flint, C NE NE sec. 29-20-34. Wildcat; drlg. 1,750 ft.
Ohio Oil Co. No. 2 Grizzell, C NW SE sec. 5-22-37. Drlg.
Ohio Oil Co. No. 1 Kutter D, C SW SW sec. 8-19-37. Drlg. 3,535 ft.
Ohio Oil Co. No. 7 State-McDonald, C SW SE sec. 16-22-36. T.D. 3,871 ft.; cleaning out.
Ohio Oil Co. No. 2 Turner, SW NW SE sec. 29-21-37. T.D. 3,775 ft.; testing.
Phillips Pet. Co. No. 1 Lea, C NW NW sec. 30-17-34. Wildcat; T.D. 4,686 ft.; to standardize.
Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.
Plains Prod. Co. No. 2 Moseley, SE sec. 34-22-37. Cellar.
Repollo Oil Co. No. 1 Carter, SW SE NE sec. 8-24-37. Drlg. 1,040 ft.
Repollo Oil Co. No. 2 Christmas, sec. 28-22-37. T.D. 4,073 ft.; P.B. 3,692 ft.; testing.
Repollo Oil Co. No. 3 Jamison, SW NE NE sec. 21-24-37. T.D. 3,519 ft.; cleaning out.
Repollo Oil Co. No. 1 Turner, sec. 29-21-37. T.D. 3,800 ft.; flowed 66 B.O. in 24 hrs.
Repollo Oil Co. No. 2 Moseley, NE SE SW sec. 34-24-37. Drlg. 910 ft.
Rowan Drlg. Co. No. 1-A Elliott, SW sec. 27-22-37. T.D. 3,418 ft.; drlg. plug.
Rowan Drlg. Co. No. 1 Elliott B, C NE NW sec. 9-22-37. T.D. 40 ft.; rigging up cable tools.
Rowan Drlg. Co. No. 2 Elliott B, C NW NW sec. 9-22-37. Drlg. 1,113 ft.
Rowan Drlg. Co. No. 2 Walden, C NE NW sec. 15-22-37. Derrick.
Samedan Oil Co. No. 3 Hughes, sec. 4-23-27. T.D. 3,631 ft.
Schermerhorn Oil Co. No. 2 Woolworth, sec. 29-24-37. Drlg. 2,985 ft.
Shell Pet. Corp. No. 1-L State, NE NE SE sec. 1-21-35. Drlg. 3,029 ft.
Skelly Oil Co. No. 1 Baker, C NW NW sec. 26-22-37. Drlg. 3,624 ft.
Skelly Oil Co. No. 5 J. B. Baker, C SE NW sec. 27-22-37. T.D. 3,400 ft.; set 7-in. csg.
Skelly Oil Co. No. 2-B Harrison, C NW NW sec. 9-23-37. T.D. 3,682 ft.; to acidize.
Skelly Oil Co. No. 1 Grizzell, C SW NE sec. 6-22-37. T.D. 3,614 ft.; set 7-in. 3,614 ft.
Skelly Oil Co. No. 1 Hill, C Lot 7, sec. 6-21-37. T.D. 3,530 ft.; jarring on tools.
Skelly Oil Co. No. 3 E. Sims, C SE SE sec. 3-23-37. Drk.
Skelly Oil Co. No. 3 G. W. Sims, C NW NE sec. 9-23-37. T.D. 3,642 ft.; cleaning out.
Skelly Oil Co. No. 4 G. W. Sims, C NW NW sec. 10-23-37. T.D. 3,410 ft.; set 7-in. at 3,409 ft.
Skelly Oil Co. No. 2 H. O. Sims, sec. 4-23-37. T.D. 3,668 ft.; cleaning out.
Skelly Oil Co. No. 1-C R. R. Sims, sec. 3-23-37. Drlg. 3,622 ft.
Skelly Oil Co. No. 6 R. R. Sims, C SW SW sec. 3-23-37. Drlg. 520 ft.
Skelly Oil Co. No. 1-C W. P. Sims, C SW NE sec. 10-23-37. Drlg. 1,938 ft.
Stanolind O. & G. Co. No. 26-A Farnsworth, C SE NW sec. 18-26-37. Drlg. 2,760 ft.
Stanolind O. & G. Co. No. 4-A Gilluly, C NW NE sec. 24-20-36. T.D. 3,875 ft.; testing.
Stanolind O. & G. Co. No. 6-A Gilluly, C NE SW sec. 25-20-36. Drlg. 3,285 ft.
Stanolind O. & G. Co. No. 7 Gilluly A, C SW SE sec. 24-20-36. T.D. 2,525 ft.; set 9⅝-in. csg.
Stanolind O. & G. Co. No. 8 Gilluly A, C NW SE sec. 24-20-36. Derrick.
Stanolind O. & G. Co. No. 9-A Gilluly, C NE NW sec. 24-20-36. Cellar and pits.
Stanolind O. & G. Co. No. 1 Hill, C SW NE sec. 5-21-37. T.D. 3,761 ft.; installing pump.
Stanolind O. & G. Co. No. 2-B Langlie, C NW NW sec. 15-25-37. T.D. 3,181 ft.; set 5½-in. 3,163 ft.
Stanolind O. & G. Co. No. 3-B Langlie, C SW SW sec. 14-25-37. Drlg. 3,050 ft.
Stanolind O. & G. Co. No. 1-B Mevers, C NW NW sec. 7-24-37. T.D. 3,160 ft.; set 5½-in. at 3,150 ft.
Stanolind O. & G. Co. No. 1 State, C SE SE sec. 2-21-36. Derrick.
Stanolind O. & G. Co. No. 2 State, C SW SE sec. 2-21-36. Drlg. 3,470 ft.
W. H. Street No. 2 Wood, C SW NE sec. 22-22-37. T.D. 3,692 ft.; swabbing and testing.
Texas Co. No. 1-B Keohane, C NW NE sec. 18-19-37. T.D. 3,870 ft.; set 7-in. csg.
Texas Co. No. 11 Lieu Lands, C NW NW sec. 20-20-37. T.D. 3,867 ft.; testing.
Texas Co. No. 5-C State, C NE NE sec. 19-20-37. T.D. 3,870 ft.; running tubing.
Texas Co. No. 2 Weir, C SE SW sec. 23-19-36. Drlg. 550 ft.
Texas Pacific C. & O. Co. No. 5-A State, sec. 19-22-36. Drlg. 3,070 ft.
Tide Water Oil Co. No. 4-J State, C NE NW sec. 17-19-37. Drlg. 2,980 ft.
Tide Water Oil Co. No. 2-K State, C SE SW sec. 13-20-36. T.D. 3,866 ft.; testing.
Western Gas Co. No. 4 Harrison, C NW SW sec. 29-24-37. T.D. 3,699 ft.; P.B. 3,500 ft.; to perforate.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 3,900 ft.; pumping 5 to 10 B.O. daily.
Woodley Pet. Co. No. 2 Cooke, C SE SE sec. 28-25-37. Drlg. 1,250 ft.

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 55 ft.; shut down.
Fred Brainerd No. 2 Brainerd, sec. 5-18-27. T.D. 1,100 ft.; running csg.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. T.D. 460 ft.; lowering casing.
Carper Drlg. Co. No. 2 Geissler, SW SE NW sec. 23-17-30. R.U.M.
Cities Service Oil Co. No. 1 State, CSL SW SE sec. 16-17-30. T.D. 745 ft.; set 8¼-in. csg. to 565 ft.
T. D. Collins No. 1 Weiler, C NW NW sec. 13-24-36. T.D. 1,970 ft.; P.B. 1,965 ft.; W.O.C.
Continental Oil Co. No. 1 Barret, SE sec. 14-20-30. Drlg. 800 ft.
Continental Oil Co. No. 1 Etz, C NW NE sec. 24-16-30. Drlg. 2,450 ft.
Emperor Oil Co. No. 3 Puckett, C NE NW sec. 24-17-31. Drlg. 1,050 ft.
Finley & Cherry No. 1 Buchley, C NW NW sec. 28-16-31. Wildcat; T.D. 560 ft.; shut down.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,800 ft.
Franklin Pet. Corp. No. 1 Nelson, NW sec. 4-18-30. Wildcat; T.D. 2,953 ft.; P.B. 2,906 ft.; swabbing.
C. J. Frederick No. 1 Reed, C NE SW sec. 28-24-28. R.U. machine.
F. W. & Y. Oil Co. No. 5 Gissler, C NE SE sec. 14-17-30. T.D. 3,450 ft.; P.B. 3,370 ft.; swabbing 75 bbls. oil dly.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. T.D. 2,953 ft.; fishing.

F. W. & Y. Oil Co. No. 4-A Jackson, NE sec. 13-17-30. Drlg. 2,968 ft.
F. W. & Y. Oil Co. No. 5-A Jackson, NE sec. 13-17-30. Rig.
F. W. & Y. Oil Co. No 3-X Jackson, SE sec. 13-17-30. Drlg. 3,010 ft.
F. W. & Y. Oil Co. No. 2-A Stevens, C NW SW sec. 13-17-30. Drlg. 3,420 ft.
F. W. & Y. Oil Co. No. 3-A Stevens, NW sec. 13-17-30. Drlg. 3,405 ft.
F. W. & Y. Oil Co. No. 4-A Stevens, C SW SW sec. 13-17-30. T.D. 2,295 ft.; casing collapsed.
F. W. & Y. Oil Co. No. 2-B Stevens, NW sec. 13-17-30. Rig.
Graysburg Oil Co. No. 8 Burch, SE SE NW sec. 19-17-30. T.D. 463 ft.; set 8¼-in. csg.
R. L. Holcomb No. 1 State, NW sec. 22-17-28. T.D. 115 ft.; shut down.
H. & W. Drlg. Co. No. 1 Storey Permit, C NW SE sec. 31-19-30. Drlg. 890 ft.
Woodworth Hawkins No. 1 Mack, C SW SW sec. 20-24-27. T.D. 154 ft.; S.D. for repairs.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. T.D. 705 ft.; S.D. for repairs.
Murchison & Closuit No. 1-C State, SW SE NE sec. 16-17-31. Drlg. 3,507 ft.
W. A. Nichols No. 1 Johnson, NE sec. 35-16-21. Wildcat; T.D. 3,310 ft.; running casing.
Premier Pet. Corp. No. 1-E Parker, sec. 22-17-30. Drlg. 1,740 ft.
Red Lake No. 9 State, sec. 22-17-28. T.D. 1,954 ft.; C.O.; 1,100 ft. oil in hole.
Repollo Oil Co. No. 2-D McIntyre, NW NE SW sec. 20-17-30. Drlg. 2,610 ft.
Republic Prod. Co. No. 2-B Robinson, sec. 27-17-29. T.D. 2,805 ft.; cleaning out.
Paul Sargent No. 1 State, NE sec. 16-17-31. Drlg. 3,292 ft.
R. A. Shugart No. 1 Sullivan, C NW SW sec. 35-18-31. Drlg. 1,147 ft.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 575 ft.; shut down.
Superior Oil Co. No. 1 Foster, SE SE NE sec. 17-17-31. Drlg. 3,240 ft.
Tigner, Etz & Keyes No. 2-B Keyes, NW sec. 10-17-28. T.D. 980 ft.; S.D.
Weiner & McDowall No. 1 Kerr, C SE NW sec. 3-24-24. T.D. 1,750 ft.; S.D. for csg.
W. K. Royalty Co. No. 1 State, C SW NE sec. 16-17-31. Drlg. 2,370 ft.
Western Drlg. & Eng. Co. No. 1 Western, NW sec. 26-17-29. Drlg. 2,630 ft.
Western Gas Co. No. 1 Cagle, C NW NW sec. 8-26-30. Drlg. 1,093 ft.
Neil H. Wills No. 1 Vickers, C NW SE sec. 23-20-28. Wildcat; drlg. 725 ft.

Chaves County

English & Harmon No. 1 Billingslea, SE sec. 9-15-29. T.D. 3,545 ft.; plugging back to shoot upper shows.

Curry County

Bond & Harrison No. 1 Hart Ranch, C NW SE sec. 13-2n-31. Drlg. 2,310 ft.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft.; fishing.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8. T.D. 263 ft.; shut down.
Fred Turner No. 1 Evans, NW NW SW sec. 22-14-12. O.W.D.D.; wildcat; T.D. 3,763 ft.; S.D.

Roosevelt County

C. S. Peterson and Conquistadores Oil Co. No. 1 Good, NW SE SE sec. 28-5s-30. Rigging up standard tools.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. Drlg. 3,600 ft.

San Juan County

Continental Oil Co. No. 63 Rattlesnake, C SW NE section 2-29n-19w, Rattlesnake pool, was completed as a flowing well at 834 feet, making 102 bbls. first 24 hours.

Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,995 ft.
Red Butte Oil Co. No. 1 Govt., C SW SW sec. 6-21n-13w. Drlg. 510 ft.
Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. S.D. 725 ft. for pipe.

Socorro County

Central New Mexico Oil Co. No. 1 Brown, SE NW sec. 16-3n-1e. Drlg. 300 ft.; rotary tools.

Valencia County

C. A. Brober et al No. 1 Fuqua, NE NE sec. 19-5n-3e. Drlg. below 700 ft.

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE cor. sec. 27-3s-64w. S.D. 4,345 ft.

Archuleta County

Cortez Oil Co. No. 1-A Crowley, NW SE NE sec. 2-32n-2e. S.D. 40 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reader, SW SE SW sec. 24-33n-2e. T.D. 1,005 ft.; C.O. at 965 ft. and carrying 5⅓-in.
Oil City Pet. Co. No. 1-A Garnett, NE NW SW sec. 25-33n-2e. T.D. 1,515 ft.; rng. 6⅝-in. to set at 1,365 ft.; will redrill to bttm. and set 5⅓-in.

Bent County

The Indian Territory Illuminating Oil Co. No. 1 Arbes, in the Big Bend district, eastern Colorado, is reaching an interesting stage. At last reports it was coring at 4,790 feet in the Pennsylvania formation. It topped that horizon at approximately 4,765 feet. A core taken from 4,780 to 4,590 feet showed fair saturation of 38-gravity oil. It will run a Halliburton tester to see what it amounts to.

Indian Terr. Ill. Oil Co. and Olson Drlg. Co. No. 1 Arbes, C Lot 2, sec. 2-21-48w. Cg. 4,790 ft.

Boulder County

J. B. Furstenberg No. 1 Foote, SE sec. 20-1n-70w. Drlg. 2,095 ft.
Boulder Prod. & Dev. Co. No. 11 Harlow Est., SE NE sec. 36-2n-71w. S.D.O. 765 ft.; dry in Muddy.

Fremont County

Utex Oil Co. No. 26, C SE SW sec. 20-20s-69w. Drlg. 1,925 ft.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE sec. 36-7s-88w. S.D. 290 ft.

Kiowa County

Morgan, Flynn & Cobb No. 1 Hostetter, Nee-No-Shee district, topped the Kansas City lime at 3,760 feet and appears to be running regionally high. Core taken at 3,815-20 feet (correct) had a show of oil, but not much porosity. Core from 3,825-35 feet had no shows.

Morgan & Flynn et al No. 1 Hostetter, C NW SE sec. 6-20s-46w. Drlg. 4,170 ft.

Larimer County

Great West O. & G. Corp. No. 1 Haworth, C SW SE sec. 16-4n-69w. Drlg. blk. sh. 2,125 ft.

LaPlata County

N. Spatter No. 1 Bryce, SE SW SW sec. 31-33n-9w. T.D. 410 ft.; rng. pipe.

Lincoln County

Gulf Oil Corp. is moving in materials and drilling water well for its important eastern Colorado wildcat near the town of Karvel, in Lincoln County. Parker Drilling Co. has the contract. The company is reported to have around 100,000 acres in the block. To the west and southwest in Townships 15 and 16s, Ranges 53, 54 and 55w, is another large block of about 40,000 acres which is credited to the Carter Oil Co. The new test lies between the two blocks and is on the west side of the Sierra Grande arch, the first of the deep tests on that side. The location is approximately 30 miles to the west and north of the Gulf's former test in its No. 1 Risser-Union Pacific on the Galatea block; 55 miles to the northwest of the Indian Territory drilling wildcat in the Big Bend district, and 45 miles northwest of the Morgan, Flynn & Cobb drilling test on the Nee-No-Shee block.

Gulf Oil Corp. No. 1 Smith, C SW SE sec. 19-15s-53w. M.I.M. and drlg. W.W.

Mesa County

Midwest Drlg. & Dev. Co. No. 1 Callahan, NE NW SE sec. 30-8s-97w. T.D. 1,174 ft.; U.R. 10-in. through wet sd. into dry sd.; G.S. through 350 ft. of W.
Continental Oil Co. et al No. 1 Miller, SW SW NW sec. 36-8s-91w. M.I.M.

Moffat County

Mountain Fuel Supply Co. and Kerlyn Oil Co. No. 1 Duncan, C NE SW sec. 1-11n-100w. R.U.R.
Stanolind O. & G. Co. No. 1-X Parkman, SE NW NW sec. 23-4n-92w. T.D. 3,451 ft.; R.U. for pmp. test; will D.D.
Morapas Pet. Co. No. 1 Coles, SW SW SE sec. 1-3n-92w. Drlg. 1,620 ft.; mudded 10-in. at 1,483 ft.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. S.D. 2,500 ft.; W.O. rotary tools.
Texas Co. No. 4 Iles Inv. Co., Lot 7, sec. 23-9n-92w. T.D. 3,490 ft.; tstg.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; fsg. two strings tools and bailer.

Park County

South Park Oil Co. No. 1 State, SE SE SW sec. 16-11s-75w. T.D. 5,705 ft.; C.O. to set 4⅝-in.
South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75w. S.D. 5,210 ft.; M.I. 6¼-in.

Pitkin County

Glenco Dev. Co. No. 1 Govt., NW cor. sec. 9-10s-89w. T.D. 1,040 ft.; rmg. 10-in. hole to 12½-in.

Rio Blanco County

Buford Oil Co. No. 1 Govt., C SW SW sec. 16-1n-91w. Rdy. to spd.; will spud Aug. 29.
Texas Co. and California Co. No. 1 Unit, SW SE NW sec. 35-3n-94w. Drlg. blue sh. 3,420 ft.

WYOMING

Albany County

Wyco Oil Co., Ltd., which recently took over the Hal Blakeman operation in East Rock River, has plugged back from total depth of 1,681 feet to 765 feet and is running the 8¼-inch to the top of the Wall Creek at 725 feet to test. At this depth on the way down it showed for around 600,000 feet of gas per day. C. D. Cunningham, of Greeley, is president of the new company and Fred Mason, of the Consumers Cooperative Oil Co., is vice president. Location has been made for No. 2 Chapple, slightly to the northeast of No. 1 Chapple, to go to the Sundance, expected within 2,500 feet.

Wyco Oil Co., Ltd., No. 2 Chapple, NE NE NW sec. 33-21n-76w. Set 243 ft. 8¼-in. with 100 sacks; prep. to core Wall Creek.
Ohio Oil Co. No. 1 Griffin, C SE SW sec. 2-21n-77w. M.I.M.
Murphy Oil Co. No. 8 Holst, C SW SE sec. 13-17-77w. Drlg. var. sh. and shells 3,599 ft.
Murphy Oil Co. No. 9 Holst, NW SE NE sec. 13-17n-77w. Drlg. gr. sh. 221 ft.
Wyco Oil Co., Ltd., No. 1 Chapple, C NE NW sec. 33-21n-67w. T.D. 1,681 ft.; P.B. to 765 ft. to test Wall Creek sd.

Big Horn County

Ohio Oil Co. No. 3 Sidon Canal, NW SW (Lot 40), sec. 24-56n-97w. Bldg. road.
Yale Pet. Corp. No. 1 Stock-Jones, SE cor. sec. 52-56n-97w. T.D. 4,050 ft.; cir. oil to free D.P.
Ohio Oil Co. No. 2 Byron-Baker, SW NW sec. 23-56n-97w. T.D. 5,232 ft.; cmtd. 7-in. at 5,205 ft.; W.O.C.
Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. Cg. 5,832 ft.; top Embar 5,727 ft.; no shows.
Joan Oil Co. No. 1 Howell, sec. 32-55n-97w (Lot 63). T.D. 1,150 ft.; U.R. 12½-in.
Peay Oil Co. No. 1 Denio, Tr. 43-C, sec. 15-55n-97w. T.D. 3,930 ft.; fsg.
Woods-Callahan Oil Co., Ltd., and Wyoming O. & R. Co. No. 1 Evans, NE NE NW sec. 12-44n-91w. Wtr. in Madison below 2,530 ft.; will P.B. to Embar at 1,520 ft.

Campbell County

Powder River O. & G. Co. No. 1 Rhodes, NE SE NW sec. 24-49n-74w. Drlg. 475 ft.; carrying 15⅛-in.

Carbon County

Ohio Oil Co. No. 12 H.&C., SE SW sec. 35-20n-78w. Loc.; M.I.M.

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Sinclair-Wyoming Oil Co. No. 11 Wertz, SE NW NW sec. 7-26n-89w. T.D. 4,048 ft.; set 9⅝-in. at 4,326 ft.; W.O.C.
Ohio Oil Co. No. 1 Wyo. O. & G. Co., C SE SW sec. 29-27n-89w. T.D. 1,488 ft.; plg. nearby old well before completing.
Producers Oil Co. No. 1, CNL, sec. 14-20s-88w. Drlg. 194 ft.
Ohio Oil Co.-California Co. No. 5 Cronberg-U. P., C NW NW sec. 25-21-79w. Drlg. 4,559 ft.
Ohio Oil Co. No. 1 Union Pacific, C NW NW sec. 20-21n-80w. Drlg. 2,735 ft.
Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec 26-21n-79w. Drlg. 4,452 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. T.D. 2,347 ft.; P.B. to second Sundance at 2,140-80 ft.; shot with 40 qts.; tstg.

Converse County

Paul Thornton et al No. 1 Roth, C NW SE sec. 13-32n-69w. Spdg.
Wyoming Southern Oil Co. No. 1 Lane, C NW NE sec. 27-32n-69w. Spd. and S.D.
Elbe Oil Ld. & Dev. Co. No. 1 Benham, NW NE sec. 5-31-70w. M.I.M.
Tom Carney No. 1 Beaver, SE SE SW sec. 28-35n-68w. M.I.M.
Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. Drlg. sh. 3,805 ft.
Wyoming Southern Oil Co. No. 3 Salisbury, NE NE SE sec. 27-32n-69w (cor. loc.). Spdg.

Fremont County

Stanolind O. & G. Co. No. 1 Govt., C SE SE sec. 3-33n-96w (cor. loc.). Drlg. W.W.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. T.D. 7,858 ft. in Amsden; fsg. core bbl.
H. Kenyon Burch No. 1 Enos, CEL NE NE sec. 28-3n-1w. S.D.O. 970 ft.; no shows.
Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. Drlg. 425 ft.

Hot Springs County

Italo Pet. Corp. No. 1 Phebus-Govt., NW NW SW sec. 11-44n-98w. R.U.R.

Johnson County

Carter Oil Co. No. 3 Rider, C NW SE sec. 17-48n-82w. Drlg. Madison 7,111 ft.

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-11w. Deepened to 1,156 ft.; recmtd. 8⅝-in. at 1,135 ft.

Natrona County

Stanolind O. & G. Co. No. 11 Wyo. Asso.-Tensleep, C NE NW sec. 35-40n-79w. Cellar.
Stanolind O. & G. Co. No. 29 Wyo. Asso.-Tensleep, C SW SW sec. 26-40n-79w. Cellar.
Stanolind O. & G. Co. No. 11 Wyo. Asso.-Tensleep, C NE SW sec. 35-40n-79w. Bldg. rig.
General Pet. Corp. No. 1 Govt., C NW SE sec. 21-35n-77w. R.U.R.
Stanolind O. & G. Co. No. 1 T.P., C NW SE sec. 26-40n-79w. T.D. 4,143 ft.; P.B. to 4,000 ft.
Wyalta Oil Co. No. 4 Govt., NW NW sec. 5-29n-81w. Cmtd. 6⅝-in. on top Sundance at 1,082 ft.; rng. 2-in. tbg. to test at 1,030-72 ft.
Wyalta Oil Co. No. 5 Govt., SW SW sec. 30-30n-81w. Tstg. at 1,021 ft.
Wyalta Oil Co. No. 6 Govt., NE SE NW sec. 5-29n-81w. Cmtd. 10-in. at 704 ft.; Dakota at 565-664 ft.

Niobrara County

Ohio Oil Co. No. 2 Taylor, an important test to the Minnelusa sand to the southeast of the Sundance sand wells in Lance Creek, is drilling at 5,611 feet. It topped the Minnelusa at 5,568 feet and cores showed water. It still has several hundred feet to go before reaching the pay found in the same company's No. 5 Leo in the base of the Minnelusa. This well also had water in the upper sections.

Continental Oil Co. No. 3 Apex-1, SE SE NE sec. 34-36n-65w. Cellar; (first report).

W. A. Maupin et al No. 1 Berggren, NW sec. 23-35n-63w. R.U.C.T.
J. M. Huber Corp. No. 2 Lamb, NE SE SW sec. 27-36n-65w. Drlg. 2,368 ft.
Continental Oil Co. No. 5-B Schuricht, C SW SW sec. 5-35n-65w. T.D. 4,059 ft.; rmg. 11-in. hole; S.O. 4,025 ft.
Ohio Oil Co. No. 2 Taylor-O.P.C.-32, NW NW SW sec. 3-35n-65w. Last depth reported 5,355 ft.; "mystery" well.
Ohio Oil Co. No. 2 Leo-O.P.C., NE NE SE sec. 35-36n-65w. R.U.R.
Ohio Oil Co. No. 1 Leo-O.P.C.-7, NW NW SE sec. 35-36n-65w. Drlg. 4,345 ft.; top basal Sundance 4,316 ft.
Ohio Oil Co. No. 10 Lamb-Acct. 2, C NE SE sec. 5-35n-65w. Drlg. 5,066 ft.; out of r.b. at 4,728 ft.
Continental Oil Co. No. 1 Leach, SW NE NE sec. 29-36n-64w. Drlg. sd.&sh. 2,805 ft.
Argo Oil Co. No. 4 Ford, SW NW SE sec. 33-36n-65w. Cg. 5,336 ft.
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 6-35n-65w. No report; (mystery well).
Continental Oil Co. No. 8 Otto Rohlff, SW SW SE sec. 31-36n-65w. T.D. 4,004 ft.; cmtd. 7-in. at 3,969 ft.; sat. 3,971-4,004 ft.
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. Cg. 5,802 ft.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. S.D. 4,064 ft.; Sundance at 4,049-64 ft.; dry.

Park County

Texas Co. has a good completion in the Oregon Basin field in its No. 4 Ora Sonners, SE SE SE section 29-51n-100w, which flowed 400 bbls. first 24 hours. It was acidized with 1,000 gallons. This is the first completion in that field for a long time. The runs from the field at present are around 4,500 bbls. daily.

Resolute Oil Co. No. 1 Northern Pacific, C NE NW sec. 21-57n-101w. Drlg. 3,610 ft.
Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. Drlg. 7,565 ft.

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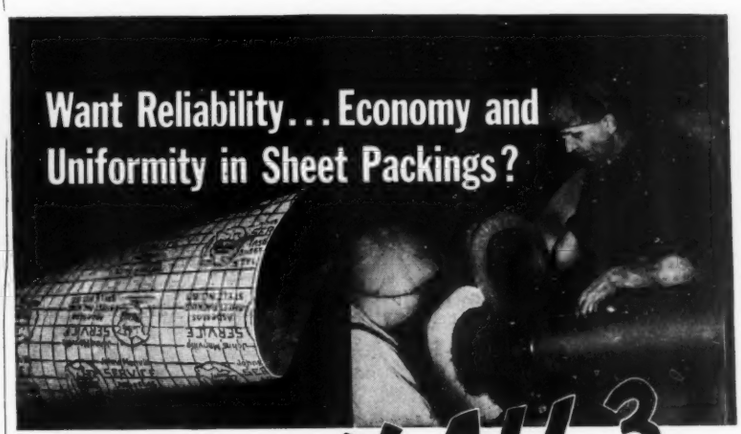

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Texas Co. No. 4 Sonners, SE cor. sec. 29-51n-100w. Cg. 3,390 ft.
Ohio Oil Co. No. 15 Woods O.P.C.-3, NW SE sec. 30-58n-99w. R.U.R.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. Drlg. gr. sd. 3,414 ft.

Sublette County

Texas Co. No. 6-J, NE SE SE sec. 27-27n-113w. Cg. 1,060 ft.

Sweetwater County

Sinclair-Wyoming Oil Co. No. 77, SE NE NE sec. 10-26n-90w, Lost Soldier district. R.U.R.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SW SE sec. 13-17n-104w. T.D. 3,275 ft.; milling on iron.
Mountain Fuel Supply Co. No. 1 Williams, C NE NE sec. 5-12n-95w. R.U.R.
Mountain Fuel Supply Co. No. 1 Stone, C SW SW sec. 18-19n-103w. Cg. 4,233 ft.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SE NE sec. 29-15n-104w, S of Baxter Basin. Loc.

Uinta County

E. A. Ottman et al No. 1 Govt., C SE NW sec. 26-14n-119w. Drlg. 930 ft.

Washakie County

Wyoming O. & R. Co. No. 9 Govt., CNL NE NW sec. 31-48n-90w. T.D. 1,460 ft.; cmtd. pipe.
Ariton & Doyle No. 1 Govt., SW SW SE sec. 29-48n-91w. S.D. 1,750 ft.

Weston County

Mush Creek Oil Co. No. 1 Carmine, SE SW sec. 31-44n-62w. Loc.
Le Faivre Oil Synd. No. 1 Martin, NW NW SW sec. 29-45n-68w. Drlg. 2,550 ft.; will U.R. 10-in. at 2,130 ft. for W.S.O.
Big Indian Oil & Dev. Co. No. 1 George, SW SE NW sec. 12-47n-64w. Drlg. 740 ft.
Osage Trust Co. No. 4, SE NW SE sec. 22-46n-63w. Drlg. 146 ft.

MONTANA

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Drlg. 4,180 ft.

Carbon County

Miracle Oil Co. No. 2, CWL NE SE sec. 3-6s-23e. Drlg. 1,400 ft.
R. C. Tarrant No. 1 Heare, CWL NE NW sec. 14-6s-19e. Drlg. 830 ft.
Ohio Oil Co. No. 16 Kirt, C SE SE sec. 4-7s-21e. T.D. Mowry sh. 4,950 ft.; 8⅝-in. set on bttm.; drlg. plug.
Geo. Muth et al No. 1, CSL SE SE sec. 23-6s-23e. S.D. indef. at 1,500 ft.
Henderson Prod. Co. No. 1-H-11 Elk 11, SE SE NW sec. 35-9s-23e. S.D. 830 ft.; (C.D.).

Choteau County

Security Pet. Corp. No. 1 Johnson, NE sec. 23-26n-3e. R.U.C.T.

Daniels County

Whitetail O. & G. Co. No. 2 Wiley, NW NW NW sec. 10-36n-50e, Scobey dome. Drlg. 1,160 ft.

Fallon County

Johnson-Burke No. 1 Govt., SE NE SE sec. 6-8n-59e. Drlg. Bearpaw sh. 700 ft.

Fergus County

Judith Operating Co. No. 2 Scharf, CWL NW NE sec. 35-22n-17e. Res. at 3,180 ft.
C. L. Emmons No. 5 Govt., CEL SE NE sec. 24-22n-18e. Drlg. Colo. sh. 740 ft.
White Top O. & G. Co. No. 1, C NE SW sec. 35-14n-19e. Drlg. Quadrant 320 ft.

Glacier County

Cut Bank operations are showing signs of slowing down as the best part of the drilling season is drawing to a close. There were four completions, of which one was a dry hole. No new operations were reported and the number of drilling wells is down to 13.

Santa Rita Oil & Gas Co. No. 2 Government, C SE SW section 4-32n-5w, in the southern part of the field and close to the edge, swabbed 162 bbls. first 23 hours at a total depth of 3,078 feet. It topped the Cut Bank sand at 3,071 feet and was still in sand when drilling stopped. It did not go to the Ellis to avoid danger of water in the bottom of the sand.

Montana Headlight Oil Co. No. 7 Yunck, SW NW NW section 1-34n-6w, in the old part of the field, swabbed 60 bbls. first 24 hours from the Cut Bank at 2,735-85 feet.

Same company's No. 8 Yunck, near C SW NW section 1-34n-6w, swabbed 78 bbls. first 24 hours from the Cut Bank at 2,742-87 feet.

Glacier Production Co. No. 1 Long, CWL NE NW section 22-32n-5w, a semiwildcat more than a mile to the southeast of the nearest producer, was dry and abandoned at 2,758 feet. The Cut Bank at 2,703-18 feet was dry. Elevation 3,862 feet.

Glacier Prod. Co. No. 3 Fuller, SE SE SE sec. 17-33n-5w. Drlg. 805 ft.; Colo. 603 ft.; 10¾-in. cmtd. at 603 ft.
Glacier Prod. Co. No. 1 Newell Unit, SE SE NW sec. 13-33n-5w. Drlg. 315 ft.
Texas Co. No. 5 Tribal-121, C SW SE sec. 36-33n-6w. Drlg. 400 ft.
Texas Co. No. 3 State (M-455), C NE NW sec. 16-32n-5w. Drlg. 320 ft.
Texas Co. No. 7 Morrison, CEL SW SE sec. 22-35n-6w. Cmtd. 10¾-in. at 319 ft.; W.O.C.
Glacier Prod. Co. No. 1 Monroe Unit, SW SW NE sec. 23-33n-5w. Drlg. 1,350 ft.
Lawler-Hoer No. 2 Downen, SW SE SW sec. 9-33n-5w. Spdg. 110 ft.
Indian Oil Co. No. 3 Haglund, Sr., C SW NW sec. 13-34n-6w. Cmtd. 10¾-in. at 510 ft.; W.O.C.
Santa Rita O. & G. Co. No. 2 Lander, CWL SW SE sec. 16-35n-6w. Cmtd. 8⅝-in. at 2,896 ft.; 100 sacks.
K. D. Pardee No. 1 Jackson, CSL SE NE sec. 35-34n-6w. Drlg. 1,470 ft.; Colo. 570 ft.; 10¾-in. at 620 ft.
R. C. Tarrant No. 6 Long-Miller, C SW NW sec. 24-34n-6w. Drlg. 2,290 ft.
Drumheller Oil Trust No. 1 fee, C NE SW sec. 17-34n-6w. Drlg. 2,670 ft.
A. B. Cobb No. 5 Walburger, C NE SE sec. 35-35n-6w. Ready to spud.
K. D. Pardee No. 1 Corrigeaux, NE NE SE sec. 35-34n-6w. Cmtd. 7-in. at 2,960 ft.; S.D.
A. R. Pardee No. 1 Anderson, C SE SW sec. 31-32n-5w. T.D. 2,900 ft.; C.O. 300 ft. off bttm.

Outside Cut Bank

W. E. Ullman No. 1 Allotted, C SW sec. 35-36n-8w. Drlg. 1,200 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15e. T.D. 1,700 ft.; S.D.

Musselshell County

R. C. Tarrant and Johnson No. 24-A Govt., SW NW NW sec. 25-11n-24e. S.D. 1,201 ft.; hd. L. shell at 1,168-70 ft.; followed by sh.

Park County

Ben W. Ryan et al No. 1 Burgess, SE SW NW sec. 28-2s-11e. Drlg. 825 ft.

Petroleum County

H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. Colo. 508 ft.
O. B. Canfield No. 1 Govt., CEL SE NE sec. 21-17n-24e. S.D. in Kootenai at 735 ft.

Pondera County

Kirk Oil Co. No. 1 Kellogg, SE NE NE sec. 31-28n-4w. T.D. 2,296 ft.; drlg. up tbg.

Roosevelt County

John W. Schmidt et al No. 1 Freu, NW NW NE sec. 21-28n-50w. Drlg. 700 ft.

Toole County

Kevin-Sunburst had five completions and two new operations.

McKnight & Henry No. 5 Seabrook, NW NE SW section 19-35n-2w, made 150 bbls. per day from the contact at 1,558-62 feet after acidizing with 500 gallons.

Donovan & Faque No. 8 McGowan, SE cor. section 8-35n-2w, had sulfur water in the contact at 1,615-25 feet and was abandoned.

Raymond E. Dockery No. 1 Gunderson, NE SE NW section 19-35n-2w, is flowing 30 bbls. per day naturally from the contact at 1,552-57 feet without acidizing.

The Big West Oil Co. No. 1 Jackson, C SW NE section 30-35n-3w, had water at 1,890 feet and was abandoned. It was acidized at 1,873-81 feet without results before deepening.

S. V. Day No. 3 Halter, NE cor. section 17-35n-2w, was completed for 8 bbls. per day at 1,605-26 feet after acidizing dry hole three times with 500 gallons each time.

P. L. Eddy No. 7 Seabrook, SE SW SW sec. 19-35n-2w. Drlg. 800 ft.; (first report).
Raymond E. Dockery No. 2 Gunderson, SE SW NW sec. 19-35n-2w. Spdg.; (first report).
M. W. Cassidy No. 2 Thompson, C SE NW sec. 2-35n-3w. Drlg. 1,500 ft.
Rice Oil Co. No. 1 Anderson, SW SW NE sec. 8-35n-1w. Drlg. 1,300 ft.
M. W. Cassidy No. 1 Mary, CEL NE NW sec. 5-34n-3w. Drlg. 500 ft.
Adlon Oils & Mines, Ltd., No. 2 Ward, C SE SE sec. 29-35n-3w. Drlg. 1,610 ft.
Anaconda-Kevin Oil Co. No. 2 Govt., NE SW NW sec. 19-35n-2w. T.D. 1,515 ft.; S.O.; will acd.
Welch Bros. No. 1 Ward, C SE NE sec. 29-35n-3w. Drlg. 270 ft.; (formerly E. C. Ellis).
C. T. Olen No. 7 Engemoen, C NW NW sec. 14-35n-2w. T.D. 1,607 ft.; contact 1,591 ft.; stdg.
C. L. Tomlinson No. 1 Davidson, NW NE SE sec. 28-35n-3w. T.D. 1,240 ft.; drlg. by tools.
A. E. Crumley No. 2 Govt., SW NE NE sec. 35-36n-2w. Drlg. 1,460 ft.; top Sunburst 1,460 ft.
E. O. Reickhoff No. 3 Baum, SW SW SE sec. 3-35n-3w. T.D. 110 ft.; str. cr. hole.
California Co. No. 7 Neumann, NW NW NE sec. 23-35n-2w. Loc.
California Co. No. 6 Neumann, NE NW NE sec. 23-35n-2e. Drlg. sdy. sh. 565 ft.
McCurdy No. 1 Hollowell, C SE SW sec. 1-35n-3w. T.D. 1,200 ft.; rng. 8¼-in.
Larson & Ness No. 1 Horner, C NW NE sec. 30-35n-3w. T.D. 1,918 ft.; acdzd.
R. C. Tarrant No. 1 Barkulo, C NW NW sec. 25-35n-4w. Drlg. 2,000 ft.
Capitol Oil Co. No. 1 Pace, C SE SW sec. 27-36n-1w T.D. 2,010 ft.; fsg. tools.
Watson et al No. 2 Leach, SE NE NE sec. 31-35n-3w. S.D. 1,796 ft.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier mach. to resume.
Ogden-Kevin Oil Co. No. 7 Zachot, SE SW NW sec. 20-35n-1w. T.D. 1,535 ft.; contact 1,520 ft.; 80 ft. oil; will acd.

Outside Kevin-Sunburst

Model Oils, Inc., No. 1 Fey, NE SW sec. 5-37-3w. Drlg. 1,550 ft.
Coolidge & Coolidge (formerly Hardrock Oil Co.) No. 1 Keilbaugh, C NW SE sec. 13-37n-1w. Drlg. 200 ft.

Yellowstone County

Western Dakota Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. Cmtd. 12½-in. at 1,021 ft.
Broadview Dome Oil Co. No. 1, NE NE SW sec. 18-3n-23e. Drlg. 2,000 ft.

UTAH

Carbon County

Kelly Young No. 1, NE NE SE sec. 20-14s-10e. T.D. 1,080 ft.; S.G. through H.F.W.; U.R. 6⅝-in. for S.O.

Daggett County

Mountain Fuel Supply Co. No. 1 Smith, C SW NE sec. 30-3n-24e. Cmtd. 13⅜-in. at 308 ft.; W.O.C.

Grand County

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft.; M.I. heavier rot. equip.
Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. Drlg. 2,334 ft.
Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. S.D. 154 ft.; trying to plug old well nearby.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56e. Drlg. 3,000 ft.

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. S.D. indef. at 2,531 ft.

Keith County

Twentieth Century Oil Co. No. 1 Stuken, C NW NW sec. 21-14n-37w. S.D. indef. 110 ft.

Lincoln County

Smith & Wright No. 1 Hansen, C SW NW sec. 24-15n-31w. Drlg. L. and shells 2,200 ft.; probably base of Lakota; good S.G. at 2,050 ft. and 2,100 ft.

Jefferson County

L. R. Page et al No. 1 Bonham, C SE SE sec. 1-1n-1e. Drlg. 490 ft.

Richardson County

Arab Pet. Co. No. 1, SE SE sec. 9-1n-14e. Drlg. 1,700 ft.

Rumanian Output Declines

With crude oil production declining almost monthly through the first half of 1937, Rumania continues to be one of the exceptions among the world's petroleum powers in the general trend toward greater output. Failure of Rumanian oil fields to maintain their previous rate of production is charged to the government's mining legislation. Restrictions have been imposed on foreign capital and companies in the acquisition of permits for exploration which have made Rumania relatively unattractive in comparison with other producing countries. Early in 1937 there was a movement started in Rumania to break down some of the barriers thrown up against foreign oil companies, but the restrictions have not been eased sufficiently to change the general attitude of outside concerns.

Drilling activity has been accelerated during the first half of the year, but the decline in older wells has been more rapid than the new supply developed. During the first five months new drilling totaled 171,208 meters, an increase of 24.2 per cent compared to the same period in 1936.

Semiofficial figures show that the loss in Rumanian production for the first six months was 16 per cent compared to 1936. Production from the intensively exploited Bucsani field in 1936 was chiefly responsible for the showing during the first half of that year. Output started to decline, however, in the last four months of 1936 and the general downward trend has not been checked to date.

Petroleum Press Service production figures for Rumanian fields covering the first halves of 1937, 1936 and 1935, follow:

(Figures in metric tons)

Month—	1937	1936	1935
January	653,162	720,760	734,907
February	577,774	669,169	662,626
March	629,461	716,146	720,270
April	604,345	717,377	687,530
May	615,760	764,322	691,578
June	570,000	764,378	670,172
Total	3,650,502	4,352,152	4,167,083

The Oil and Gas Journal production estimates covering the first half of 1937 credit Rumania with output of 27,539,150 bbls., a decline of 13 per cent from 31,799,000 bbls. during the first half of 1936. The margin of decline in the earlier estimated output varies only slightly with that indicated by later semiofficial figures which are subject to revision. The most significant feature of the production by months is the point to which output dropped in June, a month of exceptional demand under normal conditions. Unless stimulated by greater drilling activity and successful completions in the last half of the year, Rumania may drop still lower in the list of oil-producing countries before 1937 ends. Rumania yielded during the first half of 1937 to Iran and the Dutch East Indies and at the present rate of production is being hard pressed by Mexico.

California Field Report

By
L. P. STOCKMAN

COMPLETIONS WILL CROWD ALL TIME RECORD THIS YEAR

LOS ANGELES, Calif., Aug. 30.—Drilling operations in California will receive added impetus in the near future by the lifting of drilling restrictions in the eastern end of the Wilmington field of Los Angeles Basin and increased development of the Santa Maria Valley field and completions are consequently expected to closely approximate the peak which occurred in 1924, when 1,238 oil wells were completed. The number of strings of tools in operation is below the peak, but new wells are completed in less time due to improved drilling technique and the shallower depth at which production is being developed in the various fields now undergoing development as compared with deep zone development which was prevalent in other areas during the peak of work.

Within another month the curtailment committee will probably begin worrying about excess production of crude oil as demand begins tapering off around the middle of September and enters the period of lower consumption during the remainder the year. During the month of July, stocks of refining crude and gasoline were reduced in California in spite of high production, but some of this draft on stocks can be attributed to abnormally large offshore shipments. Shipments of kerosene and gasoline to Shanghai, China, from California ceased a fortnight ago and will not be resumed until freighters transporting this cased goods put Shanghai back on their list as a port of call. Offsetting this, however, is the possibility of increased shipments to Japan and the movement of aviation gasoline and other refined products to Chinese ports other than Shanghai, unless an effective blockade is placed around all Chinese ports.

Wilmington

Six wells were completed in the Wilmington field during the past week. Union Pacific Railroad Co., in addition to 10 drilling wells and 12 new rigs awaiting crews, has staked eight locations and will greatly increase the scope of work when the eastern end of the Wilmington field is opened up for development. General Petroleum Corp., Bankline Oil Co., Royalty Service Corp. and Superior Oil Co. will also increase drilling operations.

Union Pacific Railroad Co. completed Nos. 9 and 45, flowing 1,125 bbls. and 445 bbls. per day respectively. No. 9, bottomed at 3,619 feet, was brought in flowing 515 bbls. of clean 17.6-gravity oil daily from the Terminal zone and 610 bbls. per day of 17.7-gravity oil from the Ranger zone. It was finished with 8⅝-inch hung at 3,173 feet; was cemented through perforations at 2,670 feet, and has perforated pipe opposite the productive formation at 2,679-3,141 feet. The lower part of the hole was finished with 457 feet of 6⅝-inch liner including 384 feet of perforated landed on bottom and cemented through perforations at 3,228 feet. This is the second well in the Wilmington field which has been completed flowing from the Terminal and Ranger zones simultaneously. No. 45 was a conventional completion, as it was bottomed at 3,079 feet and finished with 711 feet of 8⅝-inch liner carrying perforations at 2,385-2,570 feet, 2,590-2,625 feet, 2,650-2,923 feet and at 2,963-3,069 feet.

Royalty Service Corp. added two new wells by completing No. 3-4 Santa Fe flowing 266 bbls. of relatively clean 20.8-gravity oil daily, and No. 4-B Santa Fe flowing 305 bbls. of 16.2-gravity oil per day. The former was bottomed at 3,600 feet and finished with a 6⅝-inch liner combination string carrying perforations at 2,854-2,981 feet, 3,006-3,054 feet, 3,128-3,169 feet and at 3,240-3,600 feet, while the latter was completed at 3,620 feet and finished with a 6⅝-inch carrying perforations at 2,928-68 feet, 3,047-3,130 feet and at 3,299-3,620 feet. Sonwell Oil Co. No. 3 Wilmington has been completed flowing 560 bbls. of clean 19.7-gravity oil daily from 3,634 feet after the hole had been finished with a 7-inch string landed on bottom, cemented through perforations at 2,951 feet and carrying perforations opposite the productive formation at 2,953-3,189 feet and at 3,255-3,634 feet. No. 20 P.T.C. of Bankline Oil Co. was completed flowing 421 bbls. of clean 20.4-gravity oil daily through a one-half inch bean. It was bottomed at 3,387 feet and the hole finished with 323 feet of 6⅝-inch liner including 317 feet of perforated landed at 3,375 feet. The two deep tests under way in the Wilmington field, No. 18 Ford of General Petroleum Corp. and No. 842-2 Gilmore of Royalty Service Corp., are rotating ahead at 5,440 feet and 5,430 feet, respectively. Several formation tests have been made on the latter well in the last 200 feet, but the results obtained have been withheld.

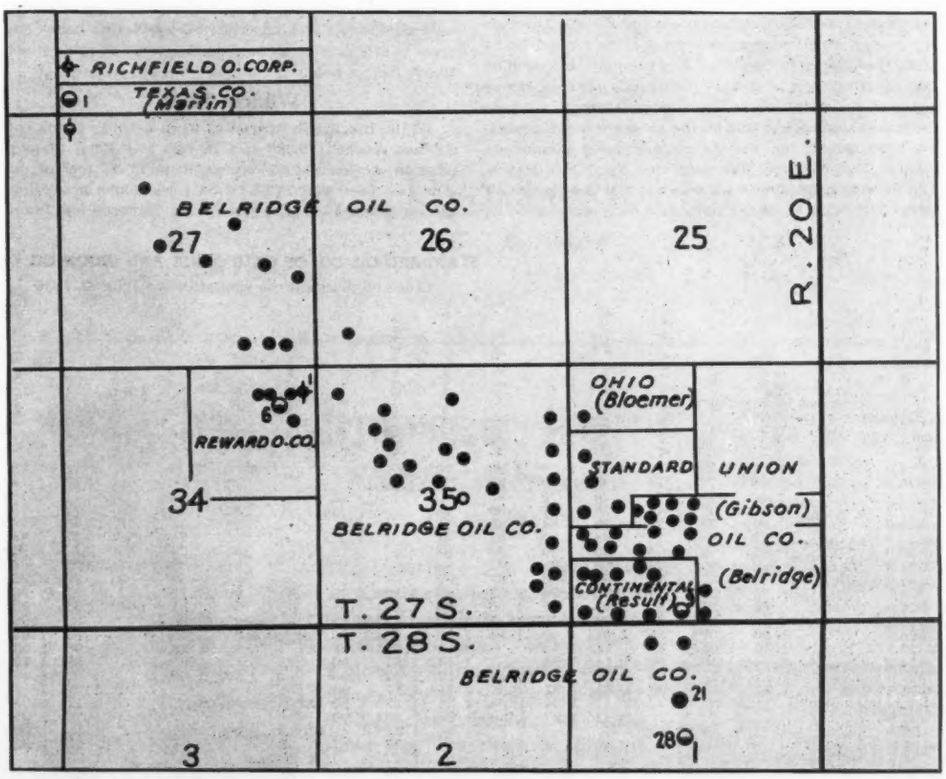
Kettleman Hills

The Kettleman North Dome Association is expected to make a production test on its No. 4-18-J, as the bit ran into a gray sand a few days ago at 10,925 feet. The bottom of the oil sand was logged at 10,861 feet, Brown shale was cored between the bottom of the oil sand and the gray sand logged in the bottom of the hole. This outpost, in addition to extending the proven limits of the Kettleman North Dome field, has definitely indicated that the Avenal zone of Eocene age is highly productive. In order to retard deep zone development, it appears quite probable that the well will be shut in immediately after completion if clean production is developed. A number of operators are desirous of postponing deep zone development as increased production of the North Dome field prior to next summer would exert a depressing effect on a situation which shows exceptional promise of greatly improved conditions during 1938. Substantial progress has been recorded this year due to stabilization of marketing conditions, increased shipments of crude and refined oil to foreign and domestic ports and a general decline in the production of semiflush fields. A number of present producing wells in the North Dome field are susceptible of deepening and, while some wells in this group may ultimately be carried down to the Avenal zone, it appears quite probable that this horizon will for the most part be developed from the surface down. Union Oil Co. and Superior Oil Co. each has a well or two which reflect edgewater encroachment and therefore could be redrilled and deepened to the Avenal zone without severely reducing current production.

Standard Oil Co. completed No. 41-33-J in section 33-21-17 flowing 1,179 bbls. of relatively clean 36.3-gravity oil and 3,000,000 feet of natural gas per day from 8,025 feet. This new well has a 7-inch water string landed at 7,558 feet and the hole was finished with 488 feet of 5¾-inch liner including 304 feet of perforated between 7,568-7,659 feet and 7,715-8,021 feet.

Yorba Linda

The Yorba Linda district of Los Angeles Basin, east of the East Coyote field and north of the Richfield district, is rapidly becoming quite active and indications point to the starting of five new wells within the next fortnight. The attention of operators was focused on this district six weeks ago when Richfield Consolidated Oil Co. completed its No. 1 pumping approximately 150 bbls. of 15.9-gravity oil per day. The area is in the foot-



The Texas Co.'s outpost, No. 1 Martin, in the northwestern end of the North Belridge field, is nearing the depth at which the Wagonwheel zone of Eocene age is expected to be encountered.

hills in the heart of thickly planted avocado and orange groves. During the current week, Signet Oil Co. completed No. 1 Kraemer in section 21-3-9, pumping 124 bbls. a day of 14.8-gravity oil, cutting 10 per cent, from 1,947 feet. Bachman Petroleum Corp. has found the pay in No. 1 Tuffree and a 10¾-inch water string has been cemented at 1,768 feet with bottom of the hole at 1,783 feet. Additional development will be started by Angelus Oil Co., which has a rig up for No. 1 Jacobs in section 22-3-9; Beverly Hills Petroleum Co. with a rig in section 21-3-9, and Hjorth & Mohr in section 22-3-9. F. E. Fairfield is expected to spud in No. 1 Oliver in section 22-3-9 and Signet Oil Co., with location staked for No. 2 Kraemer, will begin making hole within the next two weeks. These wells are all in wildcat territory.

Mount Poso

Ring Oil Co. has inaugurated an aggressive drilling program in the new productive area which it discovered north of the northern tip of the Mount Poso field of Kern County and will probably continue quite active during the next several months. The company has defined the northwest limits of production. No. 1 Hyde, in section 30-26-28, found only 6 feet of oil sand and was abandoned as a duster at 1,838 feet. Top of the productive Vedder was logged at 1,809 feet. In section 29-26-28 the company's No. 29-1 Bowles is being prepared for a production test at 1,795 feet. In the older section of the Mount Poso field, Union Oil Co. spudded No. 12 Tribe and should have it ready for a test within two weeks.

In the Round Mountain field of Kern County, Shell Oil Co. completed No. 18 Caldwell and Honolulu Oil Corp. will have No. 22 in section 18-28-29 ready for a test in a few days. The latter well is bottomed at 1,824 feet in oil sand and the hole was finished with 77 feet of 7-inch liner including 55 feet of 130-mesh landed on bottom. Shell's new producer was brought in pumping 125 bbls. of 14.5-gravity but subsequently built up to 440 bbls. daily. Shell Oil Co. has resumed work on No. 1 Louis Olcese in section 21-28-29 and preparations are under way to test out the interval between 1,417 feet and 1,760 feet. This well was drilled in 1930 to 1,840 feet and produced about 30 bbls. per day for about a month but has been on the suspended list since that time. In the Pyramid section of the Round Mountain area Eastmont Oil Co. is rigging up rotary drilling equipment on No. 3 Olcese in section 16-28-29 and the bit should begin making hole within another few days.

Rio Vista

In the Rio Vista gas field of Solano County Amerada Petroleum Corp. conducted a production test on No. 1 J. C. Hamilton in section 24-4-2 and found the well good for 43,000,000 feet of gas per day from 4,429 feet. It was completed several weeks ago flowing through a 1-inch bean and since being shut in the pressure has increased to 1,700 pounds on the tubing and 1,600 pounds on casing. This company has completed No. 1 Neil Hamilton in section 36-4-2 at 4,450 feet and it will be given an early test. Top of the Emigh gas zone was cored at 4,235 feet and a string of 7-inch was landed at 4,040 feet. On a formation test it showed a potentiality of 40,000,000 feet of dry gas per day. It is the intention of Amerada to suspend drilling operations temporarily pending the drilling of an outpost in section 25-4-2 by Tracy Drilling Co. which has a rig up on the Hansen property. Completion of the new pipe line of the Pacific Gas & Electric Co. will provide a larger market for Amerada Petroleum Co.'s natural gas later this year.

In Yolo County, Standard Oil Co. has made a formation test on No. 1 Hooper in section 32-9-1 at 3,675-3,735 feet, but when the well only showed a production of around 4,000,000 feet the company resumed drilling. On the Cook property in section 32-12-1 Standard has completed rigging up rotary tools and should begin making hole within another few days. In Humboldt County, the Texas Co. is fishing for tubing in No. 2 Eureka in section 22-3-1. This gas well, the commercial possibilities of which have not yet been determined, is standing shut in under a pressure of 2,250 pounds. Bottom of the hole is 7,708 feet with a cement plug at 6,473 feet and 5,765 feet of 2½-inch tubing in the hole. In the Semi-Tropic gas field, Standard Oil Co., Superior Oil Co., Fullerton Oil Co. and Continental Oil Co. will drill a joint test seeking crude oil production below the present productive gas horizon. This will require about 10,000 feet of hole.

Wildcat Tests

In the Rio Bravo district of Kern County, Union Oil Co. has reached 10,383 feet in No. 1-34 Kern County Land in section 34-28-25 at which point 17 feet of oil sand had been cored. The sand cored looks promising and far better than that cored a few hundred feet higher. The bit was still in the oil sand when drilling was concluded. If the sand justifies a production test the company will probably cement a liner as the formation below the shoe of the water string landed at 10,245 feet has been proved definitely to contain water. This wildcat is one of the most important tests under way in the San Joaquin Basin. Continental Oil Co.'s wildcat in the Wasco district of Kern County is showing considerable oil and gas on the ditch at 10,110 feet, but apparently, has failed to find the main body cored in No. 1 Kern County Land at 9,591 feet. Due to the variance in depth it is possible the top of the structure may be either east or south of the company's first hole. No. 2 Kern County land is due north of the first test.

Wilshire Oil Co. is making preparations to spud a wildcat in the Half Moon Bay region of San Mateo County. This is a contract job and a depth of 1,800 feet has been tentatively set as the depth at which the anticipated pay should be found. The wildcat is about 1 mile back from the water line in section 20-6-5.

In the Manhattan Beach area, Sunset Oil Co. abandoned No. 1 Security in section 19-3-14 as a duster at 7,865 feet. In the West Premier area of Kern County General Petroleum abandoned No. 1 Umbsen in section 36-27-26 as a dry hole at 6,070 feet. Top of the Vedder horizon was logged at 5,946 feet and was found barren through its entire thickness. In San Emidio district, Kern County, Union Oil Co. abandoned No. 1 Morrison in section 31-11-22 at 2,070 feet. This wildcat cored some oil sand. It was the fourth test drilled by Union Oil Co. in this area.

Coastal Area

In the Coastal plain completions were few but this

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	August 19 Total this week	August 19 Daily average	August 12 Total last week	August 12 Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Crude oil	.....	.....	.....	.....	60,035	.....
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	91,940	13,134	.....	.....	2,711,389	4,513,299
Kerosene	72,875	10,411	.....	.....	328,907	888,702
Foreign exports:						
Crude oil	482,581	68,940	238,731	34,104	9,218,063	5,839,913
Fuel oil	176,337	25,191	172,042	24,577	9,042,223	6,301,435
Diesel and gas oil	139,397	19,914	269,117	38,445	4,897,615	3,625,596
Gasoline	213,787	30,541	168,751	24,107	5,329,291	4,702,081
Kerosene	147,687	21,098	2,668	381	1,576,910	1,038,705
Other unfinished oil	1,873	268	.....	.....	849,163	112,788
Coastwise-domestic:						
Crude oil	173,832	24,833	251,957	35,994	2,871,082	4,231,913
Fuel oil	394,978	56,425	265,847	37,978	9,648,465	6,410,653
Diesel and gas oil	35,876	5,125	37,642	5,377	1,370,809	854,941
Gasoline	359,448	51,350	248,328	35,475	9,930,176	8,350,284
Kerosene	18,607	2,658	.....	.....	267,940	137,977

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	227,419
Asphalt	.....	.....	.....	.....	278,026	198,297
Lubricants	.....	.....	.....	.....	22,472	34,084
Foreign exports:						
Crude oil	73,722	10,532	107,404	15,343	1,957,468	2,167,979
Fuel oil	112,363	16,052	58,512	8,359	1,433,486	1,795,000
Diesel and gas oil	.....	.....	194,634	27,805	2,044,381	1,108,347
Gasoline	147,396	21,057	267,651	38,236	3,413,303	2,425,429
Kerosene	.....	.....	98,880	14,126	683,076	459,729
Lubricants	32,829	4,690	20,136	2,877	425,740	203,169
Coastwise-domestic:						
Fuel oil	91,389	13,056	62,831	8,976	4,063,017	4,242,070
Diesel and gas oil	31,464	4,495	39,036	5,577	695,356	479,339
Gasoline	87,278	12,468	66,736	9,534	3,022,050	3,220,043
Kerosene	26,147	3,735	.....	.....	188,822	102,798

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Yeal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$ .80	$ .79	$ .74	$ .78	$ .79	$ .80	$ .76	....	....	....	$ .80	$ .76	$ .76	$ .77	$ .78	....	....	$ .70	$ .70	$ .70	....	....	$ .70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$ .70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$ .76	.74	.74	.71	$ .76	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$ .78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.35	.86	.77	.96	.99	1.02	.96	$ .84	$ .79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.08	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

is only a temporary lull as there are a number of drilling projects which should be finished in the near future. In the Ventura Avenue field Shell Oil Co. is expected to complete No. 35 Gosnell in the deep 57 zone within a few weeks as the bit is at present rotating ahead in the pay at 9,135 feet. Tide Water Associated Oil Co. No. 137 Lloyd is going ahead in oil sand at 8,970 feet. General Petroleum Corp. has been held up with a redrill job in No. 13 Notten with bottom at 9,484 feet and the bit at 7,700 feet and is making rather slow time. This field is one of the hardest to drill in the state and these deep wells many times require from 6 to 10 months to drill into completion. In the Shiells Canyon district of Ventura County the Texas Co. finished No. 129 Shiells flowing 505 bbls. of 31.8-gravity oil and 160,000 feet of gas per day from 3,447 feet. It was brought in flowing through a 35/64-inch bean and while production was still cutting 10 per cent at last reports it is expected to show a substantial improvement.

In the Santa Maria Valley field No. 1 Rosenbloom, a joint well of Hancock Oil Co. and R. R. Bush Oil Co., was brought in flowing but sanded up within a short time and forced the crew to go back into the hole for a clean-out job. Bottom is at 5,067 feet and the hole was finished with 1,234 feet of 6⅝-inch liner including 1,202 feet of perforated landed on bottom. The Santa Maria Oil Co. has logged the top of the Monterey in No. 1 Gerard del Porto at 4,057 feet and consequently this well, which is located south of the general trend, looks considerably better. E. H. Moore, Inc., has rig up for No. 2 Union Sugar in section 19-10-34, and an early spud is expected. The first well on this lease showed oil but the sand was not thick enough to result in production. The Union Sugar property looks very good and Moore Inc., has had several offers to turn the property. In the Orcutt section of the Santa Maria field Union Oil Co. completed No. 19 Squires pumping 165 bbls. of 21.1-gravity oil cutting 12 per cent per day from 4,278 feet.

San Joaquin Basin

In the Midway-Sunset field located in the San Joaquin Basin of Kern County, the Texas Co. completed No. 23 Midway in section 32-32-24 pumping 322 bbls. of clean 22.6-gravity oil per day from 3,004 feet and should have No. 24 Midway in the same section ready for an early production test. Chanslor Canfield Midway Oil Co., Hugh B. Evans, Lilly Oil Co., Quality Oil Co. and Standard Oil Co. all have one or more potential producers going ahead in the pay. In the Kern River field, Standard Oil Co. completed No. 7 Ward fee in section 24-28-27 pumping 125 bbls. of 14.6-gravity oil and 5 bbls. of water per day from 2,015 feet after the hole had been finished with 334 feet of 6⅝-inch liner. Kern Drilling Co. abandoned No. 1 Rowan & Richards, an outpost in section 10-28-27, as a dry hole at 2,333 feet. Base of the Etchegoin was logged in this well at 2,138 feet. In the Fruitvale field L. C. Simmel completed No. 1 in section 23-29-27 pumping 317 bbls. of clean 19.3-gravity oil per day from 3,349 feet after the hole had been finished with 41 feet of 6⅝-inch liner including 19 feet of 120-mesh landed at 3,339 feet.

Long Beach

In the northwest extension of the Long Beach field, Hilldon Oil Co. has completed preparations to begin drilling operations on No. 2 Amebco, located 300 feet southwest of its recent completion which proved up the existence of commercial production west and south of a fault and if the company makes as good footage with this well as it did with No. 1 Amebco the company's second producer will be tanking oil within 30 days. West of Hilldon's initial completion Union Oil Co. is getting ready to spud in No. 1 Oil Operators, which is located on property leased from the Long Beach Waste Disposal system which was constructed by contributions from a number of operators in the Long Beach field. Union Oil Co. is reported to have requested permits to drill seven additional wells in this area but no surface locations have yet been staked. The Long Beach city council, which recently gave the harbor commission authority to regulate drilling in the eastern end of the Wilmington field, has been entertaining a motion to enact a new ordinance providing for a production tax of 1 cent per barrel but has postponed action due to the persistent efforts of producers. The proposal is not dead by any means, however, and may be revived at any time.

In the older section of the Long Beach field Coastal Oil Co. has completed No. 4 Signal pumping 98 bbls. of clean 24.4-gravity oil per day from 4,500 feet after the hole had been plugged back from 4,604 feet due to bottom water. Richfield Oil Co. No. 5 Frye, a new well, proved somewhat of a disappointment upon completion at 4,540 feet as it was good for only 114 bbls. per day on the beam and the output showed a cut of 13 per cent. In the Rosecrans field Universal Consolidated Oil Co. has completed No. 1 Trust flowing 150 bbls. of clean 33.1-gravity oil per day from 7,559 feet but the well did not show a sustained flow and preparations are being made to put it on the beam.

Western Kentucky

(Continued from Page 72)

In Bethel sand, 1,432-45 feet, shot with 60 quarts, total depth 1,471 feet; No. 26 Hackett Brothers, 40 bbls. in Bethel sand, 1,442-53, shot with 40 quarts, total depth 1,458 feet. The Petroleum Co. No. 14 Mrs. Bettie Cullen, dry hole in Jett sand, total depth 1,170 feet. Cumberland Petroleum Co. and others No. 5 D. and S. Butterfield, moving in.

McLean County

Island district: South-Penn Oil Co. No. 1 C. M. Markwell, spudding in.

Daviess County

Utica district: Daugherty & Ellis No. 2 C. W. Howard, rigging up.

Red Hill district: Pennsylvania-Indiana Oil Co. No. 16 First National Bank tract, drilling at 350 feet.

Pellville district: Rex-Pyramid Oil Co. No. 2 Rolla Cooper, dry hole through Jones sand, 622-636 feet, total depth 674 feet. Ross & Henry No. 3 Berry heirs, moving in.

Cane Run School district: South Penn Oil Co. No. 8 E. C. Ward, 766,000 feet of gas, 393 pounds rock pressure, Barlow sand, 927-945 feet.

Hewlett's Store district: Gibson & Anknay No. 1 H. Harrison, 750,000 feet of gas in Jones sand and 10 bbls. of oil from Jackson sand. Shut down at 1,030 feet on top of Barlow sand.

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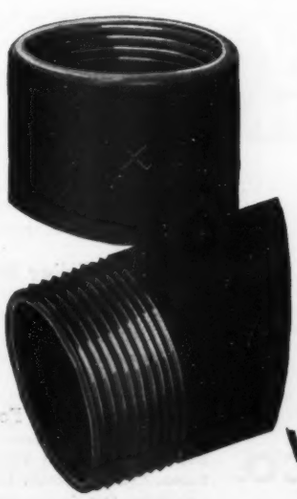

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Aug. 28.—On the west flank of South Turner Valley, Richland Royalties No. 3, LSD 14, section 28-18-2w5, finished below 6,050 feet, more than 445 feet in the Madison limestone, with initial crude production estimated over 500 bbls. a day. It encountered wet gas from around 5,777 feet and increasing quantities of crude as it was deepened in the lime. The gas flow, estimated more than 5,000,000 feet a day, was sufficient to blow the crude over the derrick. The oil is a 50-gravity crude commanding $1.85 a barrel at present refinery prices, and will be supplemented by considerable naphtha recovery from the wet gas. A definite production test is in progress. The well, located a little east of the defined crude line, was started originally by Central Royalties, Ltd., and was completed by Richland Oil Co., sponsored by W. Fay Becker and associates, on a 25 per cent royalty basis. It was drilled entirely with cable tools.

Two Tests in Lime

In West Central Turner Valley, Mercury Oils No. 8, LSD 3, section 4-19-2w5, is resuming in the Madison limestone from about 5,560 feet where casing was cemented. It got the lime at 5,516 feet, some 700 feet higher than anticipated, the log showing the normal Turner Valley sequence without the repetitions of formations encountered in the Sterling Pacific wells farther south.

In section 21-18-2w5, Davies-Royalite No. 2, LSD 13, drilled jointly by Davies Petroleums, Ltd. and Royalite Oil Co., got the Madison limestone at 6,496 feet and cemented 6-inch casing at 6,533 feet. Location is on the crude oil line about a mile south of Turner Valley Royalties No. 1 producer, and a half mile north of Foundation Royalties No. 1.

Turner Valley Producers

In section 33-18-2w5, Royalite Oil Co. No. 5 Sterling Pacific, LSD 12, bottoming in the lime at 7,063 feet, which started at better than 1,200 bbls. a day, is holding up well. Tubing adjustments are being made to increase production. No. 4 Sterling Pacific, LSD 4, which averaged 1,420 bbls. a day in July after acidizing, is making around 1,300 bbls. No. 3 Sterling Pacific, LSD 13, increased to about 340 bbls. by acid, has settled to around 160 bbls.

In section 28-18-2w5, Turner Valley Royalties No. 1, LSD 13, is making more than 1,150 bbls. a day after acidizing. B. & B. Royalties No. 1, LSD 12, is producing more than 900 bbls. a day.

In section 20-18-2w5, Monarch Royalties No. 1, LSD 9, bottoming in the lime at 7,007 feet, has cleaned tubing and separator lines with gas from Highwood-Sarcee No. 2, and given a second acid treatment. Crude production, previously 630 bbls. a day, increased to 712.76 bbls. on the first 24-hour test and then to 752.16 bbls. The gas flow, previously around 1,250,000 feet a day, was also increased.

In North Turner Valley, Model Oils No. 1, LSD 8, section 22-20-3w5, was given acid treatment, increasing the gas flow from 800,000 to around 2,000,000 feet with some increase in crude production.

West Side Drilling

In West Central Turner Valley, Richland Royalties No. 2, LSD 5, is below 5,200 feet, carrying 8-inch casing behind the tools, and expected to get the lime at 6,200 feet. Model-Spooner-Reward No. 1, LSD 4, got the Home sand at 5,980 feet and is in the Lower Blairmore formation below 6,000 feet with the lime expected around 6,400 feet.

In section 29-18-2w5, Granville Oils No. 1, LSD 16, is in the Upper Kootenay formation below 6,568 feet. It is logging about 500 feet deeper than Turner Valley Royalties No. 1 producer, immediately to the east. Cammoil No. 1, LSD 15, is around 6,450 feet, just above the Home sands, and logging about 250 feet deeper than Granville No. 1. It will get the lime below 7,000 feet. Location is nearly a half mile west of the crude line. Share Royalties No. 1, N half LSD 8, is the Upper Dalhousie formation below 6,325 feet with the lime expected around 6,650 feet. National Petroleum Corp. No. 1, S half, same LSD, is in the Blairmore formation below 5,916 feet.

In section 17-18-2w5, Prairie Royalties No. 1, LSD 16, is below 6,153 feet and expected to get the lime at 6,650 feet.

In section 16-18-2w5, Brown Oil Corp. No. 1, LSD 14, is below 6,216 feet with the lime expected at 6,400 feet.

North Turner Valley

In North Turner Valley, Phillips Royalties No. 1, LSD 16, section 16-20-3w5, is in caving formation below 3,850 feet and nearing the cardium sandstone marker.

Home Oil Co. No. 1 Millarville, LSD 8, section 33-20-3w5, is in the Blairmore formation below 4,150 feet.

Okalta Fold

On the Okalta fold, west of the South Turner Valley structure, Okalta Oils No. 6, LSD 3, section 30-18-2w5, has resumed after a fishing job at 750 feet.

South End Petroleums No. 1, LSD 6, section 36-18-3w5, is below 5,225 feet and more than 300 feet in the Fernie shales which are logging somewhat thicker than in Turner Valley. The Madison lime was originally expected around 4,900 feet.

New Valley Structure

On the New Valley structure, northeast of Turner Valley, McLeod Oil Co. No. 1, LSD 4, section 6-21-2w5, is in very hard formation below 8,462 feet with continued oil shows.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, is below 8,096 feet in an unidentified sand with a considerable oil content, and preparing to run casing as soon as the Madison limestone is encountered.

On the Duncan structure, Spindletop Oils No. 1, LSD 4, section 1-30-6w5, is running 16-inch casing to 1,500 feet after encountering three gas shows.

On the Kootenay dome west of Calgary, Roxana Petroleums No. 1, section 8-24-7w5, is below 3,165 feet, more than 55 feet in the Devonian lime, with some additional gas. The gas flow from the Banff shales is being used to fire the boilers.

On the Birch Ridge structure, Elbow Oils No. 1, LSD 11, section 35-22-5w5, is in the Lower Kootenay below 5,171 feet and cementing against caving.

On the Highwood-Sinclair structure, southwest of Turner Valley, Green Valley Oil Co. No. 1 Banner, LSD 6, section 36-17-3w5, is at 3,055 feet and underreaming and carrying 8½-inch casing from 2,800 to 3,030 feet. The Madison limestone is expected around 3,650 feet.

In the Pincher Creek area, Weymarn Petroleums No. 2, LSD 5, section 7-6-1w5, bottoming in the Dalhousie at 6,412 feet, is waiting for acid treatment. Ordinary drill pipe will be used as tubing for running acid and taking production. If the test fails to develop commercial production, the hole will be deepened to test the Madison limestone.

Moose Dome Producer

On the Moose dome, west of Calgary, Moose Oils No. 2, LSD 8, section 29-22-6w5, bottoming in the Devonian limestone at 1,552 feet, bailed close to 100 bbls. a day of 48-gravity crude on a five-day production test. Production comes from the top of the Lower Devonian formation. There has been same caving at the bottom of the 16-inch open hole. The crude is a light greenish-yellow. Production tubing will be run and the well acidized. An additional 500-bbl. tank is being set up.

Taber Field

In the Taber field, southern Alberta, Plains Petroleum No. 2, LSD 11, section 25-9-17w4, has resumed after cleaning out and running casing to 2,300 feet. It has about 1,000,000 feet of gas in the Bow Island sand at 2,125 feet and is expected to get the Clancey sand within 910 feet more. Plains No. 3, section 26-9-17w4, is around the same depth and running casing after getting about 2,000,000 feet of gas in the Bow Island sand at 2,150 feet. Plains No. 1, LSD 14, section 29-9-17w4, is installing packer and production equipment for a test of the lower sand at 3,302 feet.

Border Fields

On the Lethbridge structure, southern Alberta, Lethbridge Petroleum & Refining No. 1, LSD 12, section 11-8-22w4, is resuming in the Lower Colorado formation from 2,245 feet after running 13-inch casing.

In the eastern extension of the Red Coulee field, Home Oil Co. No. 1, LSD 8, section 1-1-18w4, is below 1,100 feet.

(Continued on Page 99)

A 6-inch salt water line being laid in the Lorraine, Kansas field. Entire job is 18,000 feet.

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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil, No. 2-2 Capitan, Santa Barbara Co.	32- 5-30	1,292	sd. sh. drig.
Hancock-Bush, No. 2-H Santa Maria, Santa Barbara	30-10-33	1,597	sd. sh. drig.
Hancock-Bush, No. 1-R Santa Maria, Santa Barbara	25-10-34	5,067	cleaning out
Macrate, A. N., No. 2-F Santa Maria, Santa Barbara	26-10-34	3,970	sd. sh. drig.
S. M. Oil, No. 1 Porte, Santa Maria, Santa Barbara	27-10-34	4,430	sd. sh. drig.
Sed Oil, No. 1 Mills, Santa Maria, Santa Barbara Co.	27-10-34	3,594	sd. sh. drig.
Ohio Oil, No. 1-M Santa Maria, Santa Barbara Co.	21-10-34	3,293	sd. sh. drig.
Union Oil, No. 2-R Santa Maria, Santa Barbara Co.	21-10-34	3,990	sd. sh. drig.
Union Oil, No. 1 Cook, Santa Maria, Santa Barbara	30-10-33	6,710	cleaning out
Union Oil, No. 4 Battle, Santa Maria, Santa Barbara	24-10-34	2,709	sd. sh. drig.
Union Oil, No. 2 LeRoy, Santa Maria, Santa Barbara	24-10-35	1,576	sd. sh. drig.
Crude Oil Drig., No. 1 Casmalia, Santa Barbara Co.	19- 9-34	500	hd. sd. drig.
Pac. Western Oil, No. 4 Santa Maria, Santa Barbara	21-10-34	4,540	completing
Rice Ranch Oil, No. 4 Orcutt, Santa Barbara Co.	23- 9-34	4,330	P.B. 3,732
So. Cal. Drig., No. 1-H Santa Maria, Santa Barbara	9- 9-33	5,003	washing out
101 Oil, No. 1 Pt. Concepcion, Santa Barbara Co.	35- 5-33	2,497	sd. sh. drig.
Tide Water A. O., No. 1-L Santa Rita, Santa Barbara	3- 6-33	2,691	br. sh. drig.
Hancock Oil, No. 2 Los Alamos, Santa Barbara Co.	6- 7-32	5,230	hd. sh. drig.
Arnold Oil, No. 2 Los Alamos, Santa Barbara Co.	8- 8-33	5,826	sd. sh. drig.
Field, O. C., No. 1-S.R., Lompoc, Santa Barbara Co.	11- 7-33	2,027	to deepen
Del Mar Oil, No. 1 Summerland, Santa Barbara Co.	16- 4-26	3,476	sd. sh. drig.
Petroleum Securities, No. 6 Ranch, Shiells, Ventura	3- 3-19	1,871	sd. sh. drig.
Texas Co., No. 129 Shiells, Ventura Co.	4- 3-19	3,447	flow. 510 b.d.
Texas Co., No. 133 Shiells, Ventura Co.	4- 3-19	3,997	sd. sh. drig.
Union Oil, No. 16 Bardsdale, Ventura Co.	12- 3-20	5,950	sd. sh. drig.
Texas Co., No. 1 Pierce, Camarillo, Ventura Co.	20- 2-21	3,598	hd. sh. drig.
Richfield Oil, No. 1 McFarland, Camarillo, Ventura	13- 2-21	2,093	hd. sh. drig.
Condor Oil, No. 1 Sespe, Ventura Co.	6- 4-19	2,087	rd. sh. drig.
Ivers, H. A., No. 14 Star, Sespe, Ventura Co.	1- 4-20	1,502	rd. sd. drig.
Williamson Oil, No. 1 Sespe, Ventura Co.	1- 4-20	309	sd. sh. drig.
Speik Oil, No. 2 Sespe, Ventura Co.	33- 5-19	3,001	sd. sh. drig.
Colima Oil, No. 2 Sespe, Ventura Co.	25- 5-19	3,400	cleaning out
Commander Oil, No. 7-F Piru, Ventura Co.	13- 4-19	286	sd. sh. drig.
Skyline Oil, No. 1-H Hopper Canyon, Ventura Co.	13- 4-18	865	sd. sh. drig.
Vai, Giovani, No. 1 Ojai, Ventura Co.	4- 4-21	1,095	recmtd. 1,056
C. C. M. Oil, No. 2 Padre Canyon, Ventura Co.	23- 3-24	7,710	P.B. 7,480
C. C. M. Oil, No. 15 Rincon, Ventura Co.	17- 3-24	4,660	P.B. 4,600
C. C. M. Oil, No. 16 Rincon, Ventura Co.	17- 3-24	1,993	sd. sh. drig.
Richfield Oil, No. 2 Hobson, Rincon, Ventura Co.	8- 3-24	4,762	recmtd. 4,658
Rincon Pet., No. 1 Shudde, Rincon, Ventura Co.	tideland	3,173	P.B. 2,850
Oxnard Oil, No. 1 Oxnard, Ventura Co.	10- 1-22	4,240	sd. sh. drig.
Vaca Oil, No. 2 Oxnard, Ventura Co.	6- 1-21	2,874	sd. sh. drig.
Tide Water A. O., No. 28 V.L.W., Ventura, Ventura	26- 3-23	5,380	sd. sh. drig.
Tide Water A. O., No. 31 V.L.W., Ventura, Ventura	24- 3-23	6,831	cmtd. 6,792
Tide Water A. O., No. 30 Lloyd, entura, Ventura	27- 3-23	3,293	sd. sh. drig.
Tide Water A. O., No. 61 Lloyd, Ventura, Ventura	27- 3-23	5,990	sd. sh. drig.
Tide Water A. O., No. 62 Lloyd, Ventura, Ventura	27- 3-23	5,755	sidetrack
Tide Water A. O., No. 125 Lloyd, Ventura, Ventura	27- 3-23	7,700	idle
Tide Water A. O., No. 137 Lloyd, Ventura, Ventura	27- 3-23	8,965	O.S. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	6,155	cmtd. 6,155
Shell Oil, No. 90 Taylor, Ventura, Ventura Co.	30- 3-23	2,680	sd. sh. drig.
Shell Oil, No. 35 Gosnell, Ventura, Ventura Co.	28- 3-23	9,020	O.S. drlg.
General Pet., No. 17 Barnard, Ventura, Ventura Co.	23- 3-23	8,176	fish, D.P.
Den Petroleum, No. 1 Devils Den, Kern Co.	20-25-19	4,380	br. sh. drig.
Tide Water A. O., No. 9-R-3 Lost Hills, Kern Co.	2-26-20	1,634	rig. to pump
Tide Water A. O., No. 10-E-3 Lost Hills, Kern Co.	3-26-20	936	sd. sh. drig.
Argo Pet. Corp., No. 1-F Lost Hills, Kern Co.	11-26-20	838	rebldg. rig
Texas Co., No. 1-A Overall, Lost Hills, Kern Co.	33-25-20	1,198	hd. sd. drig.
Birch-Ranch Oil, No. 1 Lovett, McKittrick, Kern Co.	10-30-21	1,197	sd. sh. drig.
Continental Oil, No. 2 Wasco, Kern Co.	8-27-24	10,115	sd. sh. drig.
Belridge Oil, No. 43-26 North Belridge, Kern Co.	26-27-20	4,130	sd. sh. drig.
Belridge Oil, No. 53-26 North Belridge, Kern Co.	26-27-20	4,962	br. sh. drig.
Belridge Oil, No. 61-26 North Belridge, Kern Co.	26-27-20	6,595	br. sh. drig.
Belridge Oil, No. 28-1 North Belridge, Kern Co.	1-28-20	6,594	br. sh. drig.
Tide Water A. O., No. 6 North Belridge, Kern Co.	34-27-20	8,210	O.S. drlg.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	7.850	br. sh. drig.
Shell Oil, No. 18 Caldwell, Round Mountain, Kern Co.	7-28-29	1,970	rig. to pump
Honolulu Oil, No. 22 Round Mountain, Kern Co.	18-28-29	1,824	rig. to pump
Honolulu Oil, No. 25 Round Mountain, Kern Co.	18-28-29	1,675	sd. sh. drig.
Pebble Beach Oil, No. 1 Round Mountain, Kern Co.	16-28-29	1,678	dry; abd.
Tavis, J. J., No. 1 Round Mountain, Kern Co.	4-29-29	3,020	sd. sh. drig.
Cal-Western Oil, No. 4 C.C., Round Mountain, Kern	12-28-28	1,781	gr. sh. drig.
Apex Pet., No. 4 Kern Front, Kern Co.	10-28-27	982	sd. sh. drig.
Standard Oil, No. 7 Ward, Kern Front, Kern Co.	24-28-27	2,015	pump. 125 b.d.
Oils, Inc., of California, No. 7-2 Kern Front, Kern Co.	13-28-27	1,289	P.B. 1,135
Martin, T., No. 1 Sesnon, Kern Front, Kern Co.	17-28-27	2,916	P.B. 2,908
California Star Oil, No. 2-80 Kern Front, Kern Co.	22-28-27	2,650	recmtd. 2,293
Texas Co., No. 4 Lehman, Kern Front, Kern Co.	23-28-27	2,770	pump. 125 b.d.
Texas Co., No. 9 Lehman, Kern Front, Kern Co.	23-28-27	1,671	sd. sh. drig.
Shell Oil, No. 1 Bellview, Kern Co.	31-29-27	8,741	sd. sh. drig.
Kern Drig., No. 1 R. & R., Kern River, Kern Co.	15-29-28	2,333	dry; abd.
Fuhrman, A., No. 10 Kern River, Kern Co.	28-28-28	301	sd. sh. drig.
McKeon, Inc., No. 1-A Kern River, Kern Co.	32-28-28	1,275	bailing
Ring Oil, No. 1 Hyde, Mount Poso, Kern Co.	30-26-28	1,838	dry; abd.
Ring Oil, No. 29-1 Bowles, Mount Poso, Kern Co.	29-26-28	1,795	O.S. drlg.
Framac Oil, No. 1 Brown, Mount Poso, Kern Co.	22-27-27	1,351	fish. D.P.
Tide Water A. O., No. 2 Newhope, Mount Poso, Kern	29-27-27	2,775	P.B. 2,600
Union Oil, No. 12 Tribe, Mount Poso, Kern Co.	28-27-28	983	sd. sh. drig.
H. & H. Oil, No. 1 Neff, Fruitvale, Kern Co.	23-29-27	3,793	rig. to pump
Meridian Oil, No. 5-T Fruitvale, Kern Co.	23-29-27	1,655	sd. sh. drig.
Western Gulf Oil, No. 7 Red Ribbon, Fruitvale, Kern	27-29-27	3,359	recmtd. 3,310
Siemon Bros., No. 1 Krebs, Fruitvale, Kern Co.	15-29-27	3,985	completing
Simmel, L. C., No. 1 Fruitvale, Kern Co.	23-29-27	3,349	pump. 310 b.d.
Southwestern Dev., No. 1 K.C.L., Fruitvale, Kern Co.	15-29-27	3,591	sd. sh. drig.
Sandy Oil, No. 2 Fruitvale, Kern Co.	26-29-27	3,273	sd. sh. drig.
American Expl., No. 1-G Mountain View, Kern Co.	18-30-29	4,792	P.B. 4,722
Barnsdall Oil, No. 2-N Mountain View, Kern Co.	19-30-29	4,583	sd. sh. drig.
Mohawk Pet., No. 5 Earl Fruit, Mountain View, Kern	4-31-29	5,450	O.S. drig.
North American Oil, No. 1-T Mountain View, Kern	9-31-29	4,986	sd. sh. drig.
Hogan Pet., No. 4 Symons, Mountain View, Kern Co.	5-31-29	6,188	P.B. 5,236
Hogan Pet., No. 3 Peters, Mountain View, Kern Co.	5-31-29	5,460	O.S. drig.
Greer, P. H., No. 1 Perrel, Mountain View, Kern Co.	9-31-29	4,976	sd. sh. drig.
Greer, P. H., No. 2 Perrel, Mountain View, Kern Co.	9-31-29	6,639	redrig. 5,697
General Pet., No. 1 Houchin, Arvin, Kern Co.	27-31-29	3,971	sd. sh. drig.
Arkelo Oil, No. 1 Lerdo, Kern Co.	23-28-26	10,050	redrig. 7,693
Union Oil, No. 1-34 Rio Bravo, Kern Co.	34-28-25	10,385	sd. sh. drig.
Continental Oil, No. 1 Rosedale, Kern Co.	12-29-26	10,210	fish. D.P.
Standard Oil, No. 11-7 KCL Greeley, Kern Co.	20-29-26	7,740	sd. sh. drig.
Standard Oil, No. 11-8 KCL, Greeley, Kern Co.	18-29-26	4,363	sd. sh. drig.
Standard Oil, No. 12-2 KCL, Greeley, Kern Co.	16-29-26	2,780	sd. sh. drig.
Union Oil, No. 4 San Emidio, Kern Co.	31-11-22	2,070	dry; abd.
Shell Oil, No. 4-30 Ten Section, Kern Co.	33-30-26	7,730	sd. sh. drig.
Shell Oil, No. 61-31-B Ten Section, Kern Co.	30-30-26	1,782	sd. sh. drig.
Lilly Oil, No. 1 Midway-Sunset, Kern Co.	36-32-23	2,370	O.S. drig.
Merritt Annex Oil, No. 6 Midway-Sunset, Kern Co.	25-12-24	987	sd. sh. drig.
C. C. M. Oil, No. 25-21 Midway-Sunset, Kern Co.	21-32-23	2,576	br. sh. drig.
C. C. M. Oil, No. 43-21 Midway-Sunset, Kern Co.	21-32-23	2,009	br. sh. drig.
C. C. M. Oil, No. 1-U.S., Midway-Sunset, Kern Co.	30-32-24	1,980	br. sh. drig.
Evans, H. B., No. 19 Midway-Sunset, Kern Co.	35-32-23	2,112	O.S. drig.
Standard Oil, No. 78-33-D Midway-Sunset, Kern Co.	33-32-24	3,006	sd. sh. drig.
Quality Oil, No. 1-W.P., Midway-Sunset, Kern Co.	27-32-23	2,170	O.S. drig.
Texas Co., No. 23 Midway-Sunset, Kern Co.	32-32-24	3,005	pump. 325 b.d.
Texas Co., No. 24 Midway-Sunset, Kern Co.	32-32-24	3,036	sd. sh. drig.
Transco Drig., No. 4 Grimm, Midway-Sunset, Kern	25-32-23	1,869	br. sh. drig.
Richfield Oil, No. 1-A Buena, Elk Hills, Kern Co.	7-31-25	1,987	sd. sh. drig.
Reserve Oil & Gas, No. 33-4 Tejon, Kern Co.	33-11-19	5,443	P.B. 4,569
Ohio Oil, No. 2 Tejon, Kern Co.	21-11-19	9,654	P.B. 5,972
Seaboard Oil, No. 1 Firebaugh, Madera Co.	27-12-15	3,305	sd. sh. drig.
K. N. D. A., No. 4-18-J Kettleman North, Fresno	18-21-17	10,930	sd. sh. drig.
K. N. D. A., No. 47-28-J Kettleman North, Fresno	28-21-17	7,730	sd. sh. drig.
K. N. D. A., No. 41-4-P Kettleman North, Fresno	4-22-17	7,040	br. sh. drig.
K. N. D. A., No. 83-4-P Kettleman North, Fresno	4-22-17	6,105	br. sh. drig.
K. N. D. A., No. 27-12-P Kettleman North, Kings	12-22-17	2,382	sd. sh. drig.
K. N. D. A., No. 6-6-Q Kettleman North, Kings	6-22-18	4,971	sd. sh. drig.
K. N. D. A., No. 27-6-Q Kettleman North, Kings	6-22-18	2,187	sd. sh. drig.
Standard Oil, No. 27-33-J Kettleman North, Fresno	33-21-17	6,278	sd. sh. drig.
Standard Oil, No. 41-33-J Kettleman North, Fresno	33-21-17	8,025	flow. 1,179 b.d.
Standard Oil, No. 4-3-P Kettleman North, Kings	3-22-17	8,020	sd. sh. drig.
Standard Oil, No. 2-11-P Kettleman North, Kings	11-22-17	2,182	sd. sh. drig.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drig. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., plugging big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.O.N.G., water shut off no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Standard Oil, No. 78-3-P Kettleman North, Kings	3-22-17	8,390	sd. sh. drlg.
Tembior Oil, No. 1-B Kettleman Middle, Kings Co.	25-23-18	7,803	br. sh. drlg.
Dudley Ridge Dev. Co., No. 1 Tulare Lake, Kings	24-23-20	3,600	bl. sh. drlg.
Tri-Counties Oil, No. 1 Tulare Lake, Kings Co.	10-23-22	6,010	idle
Martin, J. D., No. 4-A Pismo, San Luis Obispo Co.	5-32-13	3,342	hd. sd. drlg.
Tembior Oil, No. 1 Panorama, San Luis Obispo Co.	22-32-21	3,045	bailing
Burkholder Oil, No. 1 Panorama, San Luis Obispo	14-10-26	4,035	sd. sh. drlg.
Hancock Oil, No. 1 Huasna, San Luis Obispo Co.	30-12-33	968	cleaning out
Lewis, A. O., No. 1 Pecho, Huasna, San Luis Obispo	34-30-10	2,772	recmtd. 2,320
Elba Oil, No. 1 Pajaro, Monterey Co.	6-13-2	3,675	gr. sd. drlg.
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	1,622	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	6,473	fish. tubing
Amerada Pet., No. 1 N. Hamilton, Rio Vista, Solano	36- 4-2	4,450	gas; shut in
Buttes Oilfields, Ltd., No. 1 Kent, Sutter Co.	2-15-1	5,850	shut in.
Standard Oil, No. 1 Delano, Tulare Co.	36-24-23	7,522	sd. sh. drlg.
Amalgamated O. & G., No. 1 Delano, Tulare Co.	29-24-24	318	sd. sh. drlg.
Tulare Dome Oil, No. 1 Allensworth, Tulare Co.	17-21-23	2,651	sd. sh. drlg.
Jennings, E. P., No. 2 Allensworth, Tulare Co.	33-23-23	2,073	sd. sh. drlg.
Petaluma Expl. Co., No. 1 Petaluma, Sonoma Co.	33- 5-6	181	sd. sh. drlg.
Standard Oil, No. 1 Hooper, Woodland, Yolo Co.	32- 9-1	3,816	sd. sh. drlg.
Empire O. & G., No. 1 Woodland, Yolo Co.	8- 9-3	231	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Richfield Oil, No. 1-SF, El Segundo, Los Angeles	18- 3-14	7,690	P.B. 7,666
Richfield Oil, No. 2 Elsie, El Segundo, Los Angeles	12- 3-15	5,893	sd. sh. drlg.
Union Oil, No. 3 El Segundo, Los Angeles Co.	18- 3-14	6,498	sd. sh. drlg.
Sunshine Oil, No. 1 El Segundo, Los Angeles Co.	12- 3-15	5,297	sd. sh. drlg.
Ohio Oil, No. 6 Gough, El Segundo, Los Angeles Co.	7- 3-14	6,596	sd. sh. drlg.
Ohio Oil, No. 7 Gough, El Segundo, Los Angeles Co.	7- 3-14	3,692	sd. sh. drlg.
Texas Co., No. 3 Security, El Segundo, Los Angeles	18- 3-14	7,162	circulating
Texas Co., No. 4 Security, El Segundo, Los Angeles	18- 3-14	7,124	sd. sh. drlg.
Royalty Service, No. 2 El Segundo, Los Angeles Co.	7- 3-14	7,285	sd. sh. drlg.
Standard Oil, No. 2 Refinery, El Segundo, L. Angeles	13- 3-15	4,397	sd. sh. drlg.
Standard Oil, No. 3 Refinery, El Segundo, L. Angeles	13- 3-15	3,480	sd. sh. drlg.
Pac. Western Oil, No. 1 El Segundo, Los Angeles Co.	7- 3-14	5,840	sd. sh. drlg.
Getty Oil, No. 1 El Segundo, Los Angeles Co.	7- 3-14	5,796	sd. sh. drlg.
Republic Petroleum, No. 2 El Segundo, Los Angeles	18- 3-14	7,699	test. wet
Douglas Oil, No. 9 Peck, Lawndale, Los Angeles Co.	20- 3-14	7,340	P.B. 7,270
Young & Bryan, No. 1 Peck, Lawndale, Los Angeles	20- 3-14	7,247	C.P. 6,867
Calizoo Oil, No. 1 S.L.A., Los Angeles Co.	16- 3-13	7,523	P.B. 5,800
I. V. Oil, No. 1 Torrance, Los Angeles Co.	16- 4-14	4,280	P.B. 4,250
Keystone Oil, No. 2 Torrance, Los Angeles Co.	8- 4-14	2,591	sd. sh. drlg.
B. C. L. Oil, No. 1 Torrance, Los Angeles Co.	5- 4-14	3,260	sd. sh. drlg.
C. C. M. Oil, No. 34-T Torrance, Los Angeles Co.	16- 4-14	4,282	redrlg. 4,114
Loma Verde Oil, No. 12 Torrance, Los Angeles Co.	16- 4-14	4,791	br. sh. drlg.
McLaren & Assoc., No. 1 Palos Verdes, Los Angeles	27- 4-14	1,680	rig. to pump
Shell Oil, No. 23 Rindge, Inglewood, Los Angeles Co.	8- 2-14	3,296	O.S. drlg.
Texas Co., No. 1 Moynier, Inglewood, Los Angeles	8- 2-14	2,790	pump. water
Shell Oil, No. 91 Reyes, Dominguez, Los Angeles Co.	33- 3-13	7,732	C.P. 7,029
Tide Water A. O., No. 14 Dominguez, Los Angeles Co.	34- 3-13	4,005	cmtd. 3,965
Union Oil, No. 54 Callender, Dominguez, Los Angeles	33- 3-13	7,115	sd. sh. drlg.
Union Oil, No. 56 Callender, Dominguez, Los Angeles	33- 3-13	6,000	sd. sh. drlg.
Union Oil, No. 47 Heilman, Dominguez, Los Angeles	33- 3-13	6,390	sd. sh. drlg.
Barnsdall Oil, No. 16 O'Dea, Rosecrans, Los Angeles	18- 3-13	7,881	P.B. 7,540
Barnsdall Oil, No. 17 O'Dea, Rosecrans, Los Angeles	18- 3-13	7,087	O.S. drlg.
Union Oil, No. 17 Rosecrans, Los Angeles Co.	18- 3-13	1,996	sd. sh. drlg.
Macrate, A. N., No. 2 Rosecrans, Los Angeles Co.	17- 3-13	7,501	O.S. drlg.
Universal Consd., No. 1-T Rosecrans, Los Angeles	18- 3-13	7,559	rig. to pump
Bolsa Chica Oil, No. 1 Rosecrans, Los Angeles Co.	20- 3-13	7,944	P.B. 7,270
Union Oil, No. 19 D.R., Playa Del Rey, Los Angeles	27- 2-15	6,007	sd. sh. drlg.
Sharby Oil, No. 1 Playa Del Rey, Los Angeles Co.	22- 2-15	6,650	sd. sh. drlg.
Metropolitan Oil, No. 1 Playa Del Rey, Los Angeles	34- 2-15	6,540	deepening
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	2,050	sd. sh. drlg.
Barnsdall Oil, No. 2-S.F., Newhall, Los Angeles Co.	26- 4-17	4,971	sd. sh. drlg.
Holbrook Pet., No. 1 Newhall, Los Angeles Co.	28- 4-16	6,010	sd. sh. drlg.
General Pet., No. 17 Ford, Wilmington, Los Angeles	4- 5-13	2,425	sd. sh. drlg.
General Pet., No. 18 Ford, Wilmington, Los Angeles	4- 5-13	5,451	sd. sh. drlg.
General Pet., No. 20 Ford, Wilmington, Los Angeles	4- 5-13	2,550	sd. sh. drlg.
General Pet., No. 23 Ford, Wilmington, Los Angeles	4- 5-13	2,697	sd. sh. drlg.
General Pet., No. 3 Isco, Wilmington, Los Angeles	4- 5-13	4,497	sd. sh. drlg.
Bankline Oil, No. 6-P.T., Wilmington, Los Angeles	34- 4-13	3,361	sd. sh. drlg.
Bankline Oil, No. 15-P.T., Wilmington, Los Angeles	34- 4-13	210	sd. sh. drlg.
Bankline Oil, No. 20-P.T., Wilmington, Los Angeles	34- 4-13	3,387	flow. 425 b.d.
Bankline Oil, No. 7-3-W Wilmington, Los Angeles	34- 4-13	2,935	sd. sh. drlg.
Black Gold Oil, No. 4-B Wilmington, Los Angeles	32- 4-13	1,897	sd. sh. drlg.
Burnoel Oil, No. 586-B Wilmington, Los Angeles Co.	33- 4-13	3,380	sd. sh. drlg.
Crude Oil Drlg., No. 1-W.P., Wilmington, Los Angeles	33- 4-13	413	sd. sh. drlg.
Dunlap, D. D., No. 3 Wilmington, Los Angeles Co.	33- 4-13	2,772	sd. sh. drlg.
Exeter Oil, No. 1 Banning, Wilmington, Los Angeles	32- 4-13	2,836	sd. sh. drlg.
McDonald & Burns, No. 1 Wilmington, Los Angeles	32- 4-13	3,140	sd. sh. drlg.
Pac. Western, No. 1 Norris, Wilmington, Los Angeles	33- 4-13	2,595	sd. sh. drlg.
Packard Pet., No. 1481-1 Wilmington, Los Angeles	33- 4-13	2,920	sd. sh. drlg.
Royalty Serv., No. 3-S.F., Wilmington, Los Angeles	33- 4-13	3,600	flow. 350 b.d.
Royalty Serv., No. 4-A-S.F., Wilmington, Los Angeles	33- 4-13	1,976	sd. sh. drlg.
Royalty Serv., No. 4-B-S.F., Wilmington, Los Angeles	33- 4-13	3,620	flow. 410 b.d.
Royalty Serv., No. 16-7-2 Wilmington, Los Angeles	32- 4-13	2,588	sd. sh. drlg.
Royalty Serv., No. 1-P.E., Wilmington, Los Angeles	33- 4-13	2,530	sd. sh. drlg.
Royalty Serv., No. 2-P.E., Wilmington, Los Angeles	32- 4-13	2,671	sd. sh. drlg.
Royalty Serv., No. 842-2 Wilmington, Los Angeles	33- 4-13	5,410	sd. sh. drlg.
Royalty Serv., No. 4-B Wilmington, Los Angeles	33- 4-13	3,001	sd. sh. drlg.
Selegna Drlg., No. 8 Wilmington, Los Angeles	32- 4-13	3,000	sd. sh. drlg.
Sonwell Oil, No. 2 Wilmington, Los Angeles Co.	33- 4-13	3,634	flow. 560 b.d.
Texas Co., No. 1 Refinery, Wilmington, Los Angeles	34- 4-13	3,242	sd. sh. drlg.
Union Pacific, No. 4 Wilmington, Los Angeles Co.	4- 5-13	3,450	sd. sh. drlg.
Union Pacific, No. 9 Wilmington, Los Angeles Co.	33- 4-13	3,619	flow. 520 b.d.
Union Pacific, No. 20 Wilmington, Los Angeles Co.	3- 5-13	3,560	O.S. drlg.
Union Pacific, No. 36 Wilmington, Los Angeles Co.	33- 4-13	3,441	sd. sh. drlg.
Union Pacific, No. 39 Wilmington, Los Angeles Co.	33- 4-13	3,587	sd. sh. drlg.
Union Pacific, No. 41 Wilmington, Los Angeles Co.	34- 4-13	2,782	sd. sh. drlg.
Union Pacific, No. 42 Wilmington, Los Angeles Co.	33- 4-13	2,840	sd. sh. drlg.
Union Pacific, No. 43 Wilmington, Los Angeles Co.	4- 5-13	3,645	sd. sh. drlg.
Union Pacific, No. 45 Wilmington, Los Angeles Co.	4- 5-13	3,079	flow. 700 b.d.
Union Pacific, No. 58 Wilmington, Los Angeles Co.	4- 5-13	397	sd. sh. drlg.
Union Pacific, No. 3-C Wilmington, Los Angeles Co.	33- 4-13	3,427	sd. sh. drlg.
Wilbur, V.R.G., No. 1-S.F., Wilmington, Los Angeles	33- 4-13	3,674	sd. sh. drlg.
Wilton Oil, No. 1 Wilmington, Los Angeles Co.	5- 5-13	2,933	sd. sh. drlg.
Sunset Oil, No. 1 Manhattan, Los Angeles Co.	19- 3-14	7,865	dry; abd.
Julian, C. A., No. 1 Koch, Walnut, Los Angeles Co.	5- 2-9	2,361	sd. sh. drlg.
Richfield Oil, No. 2 Ciocca, Montebello, Los Angeles	5- 2-11	5,966	pump. water
Texas Co. No. 17 Baldwin, Montebello, Los Angeles	6- 2-11	8,046	P.B. 6,707
Standard Oil, No. 2 Temple, Montebello, Los Angeles	10- 2-11	3,249	pump. 50 b.d.
Hildon Oil, No. 2 Bixby, Los Angeles Co.	13- 4-13	388	sd. sh. drlg.
Texas Co., No. 3 Flower, Long Beach, Los Angeles	19- 4-12	4,843	cmtd. 4,378
Mitchell, A. D., No. 3 Plymouth, L. Beach, L. Angeles	19- 4-12	3,688	idle
Richfield Oil, No. 10 Denni, Long Beach, Los Angeles	19- 4-12	4,790	O.S. drlg.
Richfield Oil, No. 5 Frye, Long Beach, Los Angeles	19- 4-12	4,540	pump. 15 b.d.
Coastal O. & G., No. 1 Signal, Long Beach, L. Angeles	19- 4-12	4,500	pump. 75 b.d.
Clayton, G. L., No. 1 North Long Beach, Los Angeles	32- 3-12	5,540	sd. sh. drlg.
Union Oil, No. 100 Santa Fe Springs, Los Angeles	6- 3-11	10,789	redrlg. 7,852
Texas Co., No. 7-W Santa Fe Springs, Los Angeles	6- 3-11	6,330	hd. sh. drlg.
Continental Oil, No. 40 Bixby, Seal Beach, Orange Co.	2- 5-12	4,070	sd. sh. drlg.
Wilshire Oil, No. 1-A Huntington, Orange Co.	2- 6-11	3,960	sd. sh. drlg.
Wilshire Oil, No. 6-B Huntington, Orange Co.	2- 6-11	4,381	sd. sh. drlg.
Tide Water A. O., No. 41 M.K., Huntington, Orange	2- 6-11	4,314	pump. 116 b.d.
Union Oil, No. 10 Brooks, Huntington, Orange Co.	34- 5-11	4,252	cleaning out
Johnston Drlg., No. 1 Sunset Beach, Orange Co.	20- 5-11	4,180	sd. sh. drlg.
Shell Oil, No. 4-1 Columbia, Olinda, Orange Co.	9- 3-9	5,890	sd. sh. drlg.
Bartholomae Oil, No. 5 East Coyote, Orange Co.	22- 3-10	2,766	sd. sh. drlg.
Dolicia Oil, No. 3 A.U.W., East Coyote, Orange Co.	24- 3-10	4,089	P.B. 3,615
Tide Water A. O., No. 42 East Coyote, Orange Co.	22- 3-10	3,595	fish. D.P.
Standard Oil, No. 2-16 Kraemer, Richfield, Orange	29- 3-9	4,820	sd. sh. drlg.
Bachman Pet., No. 1 Yorba, Orange Co.	21- 3-9	1,785	O.S. drlg.
Signet Oil, No. 1 Yorba, Orange Co.	21- 3-9	1,947	pump. 120 b.d.
West American Oil, No. 1 Tustin, Orange Co.	14- 5-9	6,070	fish. D.P.
Shell Oil, No. 1-H Anaheim, Orange Co.	9- 4-10	4,605	sd. sh. drlg.

KANSAS

Week Ending August 28 (Descriptions are East unless marked otherwise)

Barber County

Olson Oil Co. and Skelly Oil Co. No. 1 Elsea, SW SE NW sec. 27-32-14w. Drlg. 2,685 ft.

W. I. Southern, Inc., No. 1 Davis, SE SE NE sec. 24-34-15w. K.C. 4,215 ft.; set 8-in. 4,572 ft.; recmtd.

Barton County

Armer & Vernon Oil & Gas Co. No. 1 Persons, SW SW SE sec. 7-17-13w. Drlg. 468 ft.

B. Hanna No. 1 Luce, SW cor sec. 21-20-13w. Set 5-in. 3,414 ft.; T.D. 3,428 ft.; acd.; C.O. 3,511 ft.

Heimerich & Payne et al No. 1 Sessler, SW SW SE sec. 29-20-1w. S.W. 3,423 ft., T.D.; P.B. 3,416 ft.; shot; C.O.

Sam Murphy No. 1 Beck, NE cor. sec. 17-17-12w. Sil. 3,355-68 ft.; T.D. 3,419 ft.; D.&A.

Phillips Pet. Co. No. 1 McClanahan, NE NE SE sec. 7-16-13w. Cd. 3,364-77 ft., T.D.; swbd. 375 B.O. in 6 hrs.; 1,700 ft. off bttm.

C. L. Price No. 1 Hammeke, NE NE SW sec. 12-18-12w. Sil. 3,415-27 ft.; 1,900 ft. O.I.H. and 5 B.W. in 1½ days.

Republic Nat. Gas Co. No. 1 Bloomer, NE NW NW sec. 14-17s-11w. T.D. 3,338 ft.; pot. 1,128 B.O.; comp.

Stanolind O. & G. Co. No. 1 Natl. Bank, SE SE SW sec. 36-16-13w. T.D. 3,425 ft.; D.&A.

Vickers Pet. Co. No. 1 Lucas, NW NW NE sec. 16-17-14w. Fsg. 2,660 ft.

Ralph Wixson et al No. 1 Buhrle, SE SE NE sec. 14-16-13w. Drlg. 1,445 ft.

Butler County

Rex & Morris et al No. 1 Stephens, SW SW SE sec. 35-23-3e. Drlg. 425 ft.

Saco Oil Co. No. 1 Cotton, SW SE sec. 16-28-6. Drlg. 2,955 ft.

Chase County

California-Illinois-Kansas Oil Co. No. 1 Hughes, SW NW SE sec. 13-22-9e. Set 5-in. 2,599 ft.; P. 7 B.O.P.H., with 90% wtr.

Chautauqua County

C. L. Brosius et al No. 1 Garrett, NW SW NW sec. 26-32-11. Run 6-in. csg. 1,940 ft.

Harrison No. 1 Brown, NE SE NE sec. 19-34-10. Drlg. 215 ft.

Robinson et al, No. 1 Foster, SW cor. sec. 6-33-12. Sil. 1,981 ft. (cor.); T.D. 1,986 ft.; P. 120 B.O. and 10 B.W. in 20 days.

C. R. Ross et al No. 1 Walker, NW NW SE sec. 5-33-11. Drlg. 2,100 ft.

S. H. Vineard No. 1 Hughes, NE NE SE sec. 13-32-12. S.D. 400 ft.

Cowley County

Lewis Prod. Co. No. 1 Feaster, SE NE SW sec. 36-32-5. T.D. 3,520 ft.; D.&A.

National Ref. Co. No. 1 Schwantes, NW SW NE sec. 16-32-3e. Drlg. 3,203 ft.

Rex & Morris et al No. 1 Lanier, NE NE NW sec. 10-30-5e. T.D. 2,917 ft.; D.&A.

E. B. Shawver No. 1 fee, NW NE SE sec. 3-30-4e. S.D. 2,806 ft.

Edwards County

Douglas & Gear et al No. 1 Meade, SE SE NW sec. 33-25-16w. Drlg. 3,715 ft.

Ellis County

Billings No. 1 Smith, SE SE NW sec. 14-12-16w. Sil. 3,356 ft.; T.D. 3,370 ft.; acd.; P. 95 B.O. in 4 hrs.; pot. 572 B.O.

Brunson Drlg. Co. et al No. 1 Weisner, SE SW SE sec. 31-13-17w. Drlg. 2,105 ft.

Colonial Oil Co. No. 1 Albert, SW SW NE sec. 31-12-18w. Drlg. 795 ft.

Lario O. & R. Co. No. 1 Bell, NW NW NE sec. 8-12-18w. Drlg. 1,280 ft.

L. M. Reynolds No. 1 Polcyn, SE SE NE sec. 24-13-16w. Drlg. 935 ft.

C. E. W. Skiles et al No. 1 Jensen, SW SE NE sec. 26-12-18w. Drlg. 2,050 ft.

Earl Wakefield et al No. 1 Burnett, NW NW NE sec. 1-11-18w. Drlg. 3,020 ft.

Western Kansas O. & R. Co. and Aylward Prod. Co. No. 1 Schmeidler, NW cor. sec. 22-12-17w. Drlg. 3,335 ft.

P. G. Reynolds et al No. 1 Karlin, NW cor. sec. 13-12-18w. Drlg. 1,160 ft.

Ellsworth County

Equity Gas Co. No. 1 Razac, NE NE SE sec. 31-15-10w. Drlg. 2,810 ft.

C. E. W. Skiles et al No. 1-A Sturn, SE SE SW sec. 31-17-9w. T.D. 3,255 ft.; D.&A.

Grant County

United Prod. Co. No. 1 Blake, C SW sec. 21-30-36w. Set 7-in. csg. 2,369 ft.; R.U. S.T.

Pannandle Eastern Pipe Line Co. No. 1 Taggert, C sec. 11-30-37w. T.D. 2,885 ft.; 2,750,000 ft. gas; comp.

Greenwood County

Ward McGinnis et al No. 1 Henly Estate, SW cor. sec. 25-25-9, T.D. 2,234 ft.; H. F.W.; P.B.; cmt. 6-in.

Ward McGinnis et al No. 1 Smith & Jobes, NW NW SE sec. 10-24-13e. Set 6-in. 1,613 ft.; T.D. 1,633 ft.; W.O.C.

S. Van Devanter et al No. 1 Dove, NE SE SW sec. 12-28-11. Fsg. 600 ft.

Hamilton County

Denver Prod. & Ref. Co. No. 1 Porter, SW SW NE sec. 30-25-41w. Sil. 6,402 ft.; T.D. 6,453 ft.; D.&A.

Harper County

Magnolia Pet. Co. No. 1 Freeman, SE NW SW sec. 3-31-6w. T.D. 4,896 ft.; D.&A.

Harvey County

E. I. Shaffer et al No. 1 Epp, SE cor. sec. 15-23-3w. T.D. 3,915 ft.; D.&A.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. Fsg. 1,450 ft.

Kingman County

Carter Oil Co. No. 1 Davis, C E½ NE NE sec. 24-28-8w. Run 12-in. to 324 ft.

Logan County

Morgan, Flynn, Cobb et al No. 1 McMullen, C NW sec. 9-13-37w. S.D. 3,489 ft. for repairs.

Lyon County

Arthur Sory No. 1 Byrd, SW SW SE sec. 32-21-11. T.D. 1,913 ft.; 200 ft. O.I.H.; shot; C.O.

Marion County

Hutchinson O. & G. Co. et al No. 1 Ehrmann, SE SE SW sec. 15-18-1e. T.D. 2,754 ft.; rng. 8-in. csg.

Western Kansas O. & R. Co. et al No. 1 Suderman, SE SW NW sec. 22-20-2e. Drlg. 2,895 ft.

McPherson County

C. E. Ash Drlg. Co. No. 1, NE NE NW sec. 19-17-4w. Drlg. 1,600 ft.

Blauvelt Bros. No. 1 Barnholt, SW SW SE sec. 30-20-5w. Chat 3,292 ft.; T.D. 3,335 ft.; P. 115 B.O. in 14 hrs.; down 5 hrs.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. Set 8-in. 2,775 ft.; S.D.

Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. S.D. 1,850 ft.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. Drlg. 4,022 ft.

Ness County

Jones & Lane No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. Drlg. 1,115 ft.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Inc. oil 4,400-02 ft.; 3,500 ft. O.I.H. at 4,406 ft.; S.D.

Osborne County

Fred C. Chaddox and Atlantic Ref. Co. No. 1 Slater, NE SW NE sec. 33-10-15w. S.D. 1,270 ft.

F. E. Fullerton & Son No. 1 Moray, NE SE SW sec. 27-10-12w. Set 13-in. at 50 ft.; W.O.C.

Pratt County

Atlantic Ref. Co. et al No. 1 Runyon, SW NW NE sec. 11-27-13w. T.D. 4,311 ft.; acd.; flwd. 75 B.O. in 4 hrs.

Skelly Oil Co. et al No. 1 Adams, SE NW NE sec. 2-28-11w. Drlg. 3,620 ft.

Reno County

Heimerich & Payne No. 1 Haines, SW cor. sec. 9-25-5w. T.D. 3,991 ft.; D.&A.

Imo O. & G. Co. et al No. 1 Watkins, SE cor. sec. 14-22-7w. Chat 3,548 ft.; T.D. 3,560 ft.; D.&A.

Pryor & Lockhart et al No. 1 Stuckey, NW SW SW sec. 31-25-5w. Drlg. 3,980

Sam Schneider et al No. 1 Kroecker, NE cor. sec. 12-22-5w. Drlg. 695 ft.

Rice County

Bell O. & G. Co. et al No. 1 Wilkins, NW NW NE sec. 23-21-9w. Simp. 3,591 ft.; Sil. 3,643 ft.; T.D. 3,662 ft.

Bridgeport Mch. Co. et al No. 1 Habiger, NW cor. sec. 5-18-10w. Pay 3,001-05 ft.; est. 6,000,000 ft. gas; flwd. oil over rig.

Gerbrand-Pulse Oil & Drilling Co. No. 1

Wellman, SW cor. sec. 22-21-9w. Drlg. 1,220 ft.
John Hanna et al No. 1 Marshall, NE NW NW sec. 30-18s-8w. S.D. 1,515 ft.
H. V. Holland et al No. 1 Brothers, SE cor. sec. 12-21-7w. T.D. 3,469 ft.; flwd. 183 B.O. in 2 hrs.; swbd. 44 B.O.P.H.
Skiles et al No. 1 Campbell, SE SE NE sec. 28-19-9w. Drlg. 1,605 ft.
A. E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. S.D. 2,423 ft.

Rooks County

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. T.D. 3,326 ft.; p. 39 B.O. and 48 B.W. in 8 hrs.
J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Fsg. 3,875 ft.

Rush County

Duwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Sil. 3,492-95 ft.; 1,500 ft. sulfur water in hole in 2½ hrs.; T.D. 3,512 ft.; S.D.O.
Earl Wakefield et al No. 1 Zimmerman, SE SE SW sec. 7-16-18w. Drlg. 1,675 ft.
Westgate-Greenland Oil Co. No. 1 Hagerman, NE cor. sec. 20-19-16w. Drlg. 3,785 ft.

Russell County

Boyle & Grossman No. 1 Deines, SE SE SW sec. 36-15-15w. Sil. 3,451 ft.; H.F.W. 3,471-76 ft.; T.D. 3,179 ft.
Cities Service Oil Co. and Texas Co. No. 1 Boxberger B, NE cor. sec. 23-13-15w. Drlg. 568 ft.
Shell Pet. Corp. No. 1 Batt, SE cor. sec. 35-15-14w. T.D. 3,320 ft.; acd.; swb. 21 B.O.P.H.
Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

Sedgwick County

Fulton et al No. 1 fee, NE SE sec. 35-28-1e. S.D. 705 ft.
Home Stake Royalty Co. No. 1 McCormick, SW SW NW sec. 23-25-3w. Drlg. 3,757 ft.
I. W. Murfin et al No. 1 Martin, SE NW sec. 32-28-1e. Drlg. 45 ft.
Palmer Oil Corp. No. 1 Royal, NE cor. sec. 15-28-1w. Drlg. 3,503 ft.
E. B. Shawver No. 1 Furman, SW NE SE sec. 24-29-3w. T.D. 4,153 ft.; S.D.O.
W. G. Talbott et al No. 1 Downs Est., SE SE NW sec. 32-28-2e. Drlg. 2,100 ft.
Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. Drlg. 1,100 ft.

Stafford County

Newman & Winemiller No. 1 Sittner, NE cor. sec. 33-21-12w. Set 7-in. 3,360 ft.; acd.; flwd. 540 B.O. in 8 hrs.
Stanolind O. & G. Co. et al No. 1 Hartnett, NW NW NE sec. 23-24-11w. Set 6-in. 3,802 ft.; R.U.S.T.

Stevens County

Kuhn Bros. et al No. 1 Youngren, SE SE NW sec. 1-32-39w. T.D. 2,600 ft.; 8,250,000 ft. gas; comp.

Sumner County

Cities Service Oil Co. No. 1 McCoy, SE SW sec. 11-35-2e. Spd.
Douglass & Gear No. 1 Strickler, SW NW NE sec. 30-32-1w. T.D. 4,457 ft.; D.&A.
W. M. McKnab No. 1 Blair, SW cor. sec. 7-30-1e. U.R. 12-in. 1,387 ft.

Trego County

Phillips Pet. Co. No. 1 Trego, C SE SW sec. 14-12-23w. Set 8-in. 3,718 ft.; R.U. S.T.
F. L. Thorn et al No. 1 Koeppen, SE SE SW sec. 31-14-24w. Drlg. 4,050 ft.

Woodson County

Becker Bros. et al No. 1 Vann, NW SW SE sec. 22-25-14. Drlg. 140 ft.
Morris et al No. 1 Koening, SE SE NW sec. 35-24-15. H.F.W. 1,458 ft.; D.&A.
Fred Rapp No. 1 Houghland, NW NW SE sec. 2-25-15. S.D. 1,400 ft.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. Drlg. 4,260 ft.

SOUTHERN OKLAHOMA

Atoka County

A. L. Larson No. 1 Mason, SW SE SE sec. 35-1n-14. Drlg. 140 ft.
C. M. Sheldon and Gardner Pet. Co. No. 1 Lee, NE NW SW sec. 2-4s-10e. Spd.

Coal County

Carter Oil Co. No. 1 Claytor, C W½ NE SW sec. 27-2n-9e. Drlg. 4,874 ft.
Phillips Pet. Co. No. 1 Beck, SE SW SW sec. 6-1n-9e. Drlg. 2,105 ft.

Comanche County

M. J. Andrichak No. 1 Korthouse, NW NE SW sec. 35-2n-10w. Drlg. 980 ft.
Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4n-11w. T.D. 2,793 ft.; S.D.

Jackson County

Ace Gutowsky No. 1 Booker, NW cor. sec. 33-2n-18w. T.D. 580 ft.; M.I.M.
Ace Gutowsky No. 1 Howard, NE SW NW sec. 10-3n-19w. T.D. 950 ft.; S.D.
E. L. Lippert et al No. 1 Miller, NW cor sec. 4-2n-18w. Drlg. 600 ft.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. S.D. 1,165 ft.
W. T. Sheldon No. 1 Chapman, C NW NW sec. 26-4s-6e. Drlg. 580 ft.

Marshall County

Paul Robb et al No. 1 Vittitoe, C NE SE sec. 11-5s-4e. O.W.D.D.; C.O. to 720 ft.; S.D.

Murray County

O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. T.D. 2,574 ft.; 1,400 ft. W.I.H. S.D.
Power Oil Co. No. 1 Lancaster Trust, SW NE sec. 10-1-2e. T.D. 3,714 ft.; cmtg. off lost drill pipe.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. Drlg. 4,375 ft.

Stephens County

Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. T.D. 8,157 ft.; acd.; flwd. 130 B.O.P.H.
Jack Cohen No. 1 Pierce, NE NE NW sec. 24-2s-6w. Drlg. 1,146 ft.
Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. Drlg. 8,905 ft.
Ed Parsons No. 1 Blake, C SW NW sec. 22-2n-8w. T.D. 4,966 ft.; est. 25 to 35 B.O.; S.D.

Tillman County

Cavens et al No. 1 Southerland, SW SW NW sec. 35-4s-16w. T.D. 44 ft.; S.D.
Gulf Oil Corp. No. 1 Prichard, SE NW SE sec. 32-3s-16w. Drlg. 1,885 ft.
Indian Territory Ill. Oil Co. No. 1 Graham, SE SE NE sec. 1-3s-19w. T.D. 3,081 ft.; H.F.O.; to test.
Tom Walker No. 1 Bowman, SW SW NW sec. 10-4s-17w. S.D. 200 ft.

OKLAHOMA

Week Ending August 28

NORTHERN OKLAHOMA

Beckham County

Bud Lewis No. 1-A Douglas C SE NE sec. 21-8n-26w. T.D. 2,237 ft.; D.&A.
Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. T.D. 2,200 ft.; U.R. csg.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. T.D. 6,235 ft.; S.D.O.
Indian Terr. Illum. Oil Co. No. 1 Dome-Bo, C NE SE sec. 29-6-10w. Set csg. 305 ft.; W.O.C.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. T.D. 7,178 ft.; P.B. and drlg. by at 6,336 ft.
Hollenbeck et al No. 1 Ward, SW SE NE sec. 30-7-1e. Drlg. 5,760 ft.

Creek County

L. B. Jackson No. 1 Alberty, NE NE NW sec. 25-18-9. T.D. 2,420 ft.; U.R.
M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. Burgess 3,005 ft.; T.D. 3,009 ft.; drlg. plug.

Garvin County

Carter Oil Co. No. 1 Potts, C E½ SE NW sec. 36-1n-3w. Drlg. 1,475 ft.
B. C. D. Edwards No. 1 Clark, NE cor. sec. 16-3n-3e. T.D. 1,400 ft.; fsg.

Grady County

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Drlg. 6,785 ft.

Grant County

Carter Oil Co. et al No. 1 Crisman, C W½ SW NW sec. 16-25-3w. T.D. 5,403 ft.; swbg. 90% S.W.; S.S.O.; tstg.

Haskell County

Continental Oil Co. No. 1 Ferguson, SW SE NE sec. 33-8-20. Drlg. 6,119 ft.

Hughes County

W. O. Allen No. 1 Barnard, SW cor. sec. 24-8-8. T.D. 4,274 ft.; P.B. 3,423 ft.; shot; 1,500,000 ft. gas.
Burke-Greis Oil Co. No. 1 Rhea, SW SW SE sec. 14-10-9. T.D. 1,780 ft.; to skid rig.
Carter Oil Co. No. 1 Hamilton, C W½ NE SW sec. 33-4-9; T.D. 6,172 ft.; P.B. 5,989 ft.; dpnd. to 5,994 ft.; set plug at 5,800 ft.; shot and acd.
S. H. Moore, Inc., No. 1 Buck, NW SW SW sec. 21-8-10. T.D. 3,488 ft.; tstg.
Moroney & Healey No. 1 Field, C NW SW sec. 11-9-11. T.D. 3,476 ft.; est. 2,500,000 ft. gas; S.D.
Phillips Pet. Co. No. 1 Becker, NE NW SW sec. 8-5-10. Spd.
Texas Co. No. 1 Cox, NE NW NW sec. 23-9-8. T.D. 4,397 ft.; P.B. 4,071 ft.; W.O.C.

Kay County

Black Gold Oil Co. No. 2 Cooley, SW cor. sec. 25-28-4e. T.D. 1,920 ft.; U.R. 6-in. at 1,720 ft.

Kiowa County

Hughes & Reese No. 1 Fultz, SE cor. sec. 10-6-18w. T.D. 600 ft.; S.D. for csg.
Kiowa Oil Corp. No. 1 Finger, C SW NE sec. 4-6-20w. T.D. 1,050 ft.; S.D.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. T.D. 6,515 ft. in Atoka: P.B. 3,820 ft.; perf. 2,720-2,970 ft.; to test at 2,700-ft. horizon.

Logan County

Shell Pet. Corp. et al No. 1 Waddle, SW SE NW sec. 36-15-4w. T.D. 6,791 ft.; D.&A.
Sunray Oil Co. and Olson Drlg. Co. No. 1 Canning, SW SW NE sec. 31-17-1w. Drlg. 2,725 ft.

Noble County

Herndon Drlg. Co. No. 1 Baggett, SE cor. sec. 13-21-3e. Drlg. 4,044 ft.
Seaboard Western Oil Co. et al No. 1 Guthrie, NW NW NE sec. 6-20-2w. Drlg. 500 ft.

Okfuskee County

F. W. Merrick No. 1 Mackey, NE NE SW sec. 29-11-10. T.D. 2,045 ft. in dry sand.
Riverland Oil Co. No. 1 Board, NE NW SE sec. 10-13-10. Set 6-in. 2,788 ft.; T.D. 2,840 ft.

Oklahoma County

Frank Buttram et al No. 1 Cole, NW cor. sec. 16-14-1e. Drlg. 4,895 ft.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 5,165 ft.; shot 4,504-45 ft.; est. 500,000 ft. dry gas; S.I.
Phillips Pet. Co. No. 1 Gilcrease, NW NW SE sec. 16-7-12. Drlg. 173 ft.

Pontotoc County

Boettcher O. & G. Co. No. 1 Cann, SE NW NE sec. 25-4n-7e. T.D. 4,347 ft.; fsg.
Kerlyn Oil Co. No. 1 Pratt, SW SE NE sec. 6-4-4e. Drlg. 773 ft.
Norbla Oil Co. No. 1 McBride, NE NE SW sec. 10-2n-5e. T.D. 300 ft.; S.D.
Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. Viola 2,595 ft.; T.D. 2,840 ft.; run Schlumberger; S.D.O.
Roodhouse et al No. 1 Booth, SE NW SE sec. 20-2-6. T.D. 4,966 ft.; P.B. 4,397 ft.; perf. csg.; flwg. avg. 44 B.O. daily.
Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. T.D. 3,320 ft.; drill pipe stuck.

Pottawatomie County

Atlantic Ref. Co. No. 1 Dooley, SE SE SW sec. 9-11-5. Set 7-in. 4,917 ft.; T.D. 4,919 ft.; P.B. 4,770 ft.; S.D.
Mid-Continent Pet. Corp. No. 1 Ne-Thah-Pea-Se, SE SE NE sec. 24-11-4. Dol. 4,853-86 ft.; shot; flwd. 110 B.O. in 7 hrs.; tbg.
Roy S. Nash et al No. 1 Miller, C N½ NE SE sec. 29-6-3e. Drlg. 4,405 ft.
British-American Oil Co. No. 1 Ramsey, SE SE NE sec. 27-6-4. T.D. 3,819 ft.; hole full sulfur wtr.; S.D.

Seminole County

Atlantic Ref. Co. and Gulf Oil Corp. No. 1 Decker, SW cor. sec. 32-11-6e. T.D. 4,690 ft.; S.D.O.
Gillespie & Moore No. 1 Gaines, NE SW SW sec. 20-6n-7e. T.D. 2,737 ft.; 34,000,000 ft. gas; comp.
E. W. Jones et al No. 1 Belford, NE SE NE sec. 9-9-8. Drlg. 3,980 ft.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Salina, SE NE NW sec. 4-5-6. T.D. 3,317 ft.; drlg. plug.

ARKANSAS

Ashley County

Phillips Pet. Co. No. 1 Godfrey, C S½ SW NW sec. 18-17-9. Drlg. 5,552 ft.

Columbia County

Robt. Keene et al No. 1 Runyon, NW SE NE sec. 1-16s-21w. S.D. 1,005 ft.
Standard of La. No. 1 J. P. McKean, SW sec. 8-16s-22w. Cg. oil sd. 4,826 ft.

Cross County

Manning & Martin, Inc., No. 1 Park-Greseck, NW NE NE sec. 4-6n-5e. Drlg. 800 ft.

Drew County

Sloan Wells et al No. 1 R. L. Hardy, SE SE NW sec. 3-14s-7w. Drk.

Hempstead County

H. D. Easton et al No. 1 R. M. LaGrone sec. 5-12-26. S.D. 2,402 ft.
Shephard & Todd et al No. 1 Smith, NW SW NE sec. 11-11-25. S.D. 2,040 ft.

Lonoke County

Frank F. Silver No. 2 Chambers, SW NE NW sec. 17-2n-7w. Tstg. S.W.; S.D.; W.O.; T.D. 1,500 ft.

Miller County—Rodessa

Anding & Bird No. 1 B. A. Skipper, SW NW SW sec. 11-20-28. Comp.; flw. 33 B.P.H.; T.D. 6,075 ft.
F. W. Burford No. 1 A. A. Capps, W½ sec. 14-20-28. T.D. 6,085 ft.; tstg.
F. W. Burdord No. 1-B A. A. Capps, NE SE SE sec. 11-20-28. Drlg. 2,390 ft.
F. W. Burdord No. 3 Easton, sec. 11-20-28. Drlg. 4,004 ft.
F. W. Burford No. 1-B G. G. Gerald, NE S½ sec. 15-20-28. Drlg. 2,115 ft.
H. L. Hunt No. 1 Womack, SE sec. 10-20-28. Drlg. 2,400 ft.
H. L. Hunt No. 2 Womack, NE SW SE sec. 10-20-28. R.U.
Wm. M. Layton No. 4 Terry, SW cor. sec. 14-20-28. 16-in. cmtd. 90 ft.
McClanahan et al No. 2 A. A. Capps, SW sec. 11-20-28. T.D. 6,001 ft.; tstg.
McClanahan et al No. 3 Capps, sec. 11-20-28. Fsg. for. D.S. 5,560 ft.
McClanahan No. 1 Larey, sec. 11-20-28. 7-in. 6,020 ft.; T.D. 6,082 ft.; W.O.C.S.
J. R. Ostrom No. 1 J. O. Gerrald, NW E½ sec. 15-20-28. 13-in. cmtd. 150 ft.
Roberts Drlg. Co. No. 1 W. W. Capps, SE NW SE sec. 10-20-28. Comp.; flw. 33 B. P.H.; T.D. 6,121 ft.

Nevada County

Benedum & Trees No. 1-A C. C. Fincher, NW NW NE sec. 10-14-20. W.O.S.R.
W. E. Lekey, Tr., No. 1 Purifey, sec. 17-11-20. Drlg. 1,630 ft.

Ouachita County

Copenhaver Oil Corp. No. 1 J. E. Evans, sec. 20-11-19. S.D.; fuel; T.D. 1,728 ft.
Tide Water-Seaboard Oil Co. No. 1 S. A. Graves Est., NW SE NW sec. 33-13-18. Drlg. 4,285 ft.

Pulaski County

A. L. Kitselman No. 2 A. L. Kitselman, Jr., SE SE SW sec. 2-1s-13e. Drlg. 1,059 ft.

Union County—Schuler

E. M. Jones et al No. 1 Marine Oil Co. fee, NW SW SE sec. 17-18-17. Drlg. 6,891 ft.
Lion Oil Rfg. Co. No. A-1 M. D. Justiss, NE NW NE sec. 19-18-17. T.D. 6,015 tstg. oil.
Lion Oil Ref. Co. No. 1-A Edna Morgan, O.W.D.D. Drlg. 5,684 ft.
Phillips Pet Co. No. 2 E. Gan, SE SW NE sec. 18-18-17. Comp.; flw. 221 B.P. D.; T.D. 6,058 ft.
Alice Sydney Oil Co. No. 2 Morgan, sec. 18-18-17. Comp.; flow 545 B.P.D.; T.D. 6,888 ft.
W. D. Wingfield et al No. 1 Sou. Kraft Corp., SW NE sec. 18-19-14. Drlg. 4,609 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

F. W. Burford No. 1 Pitts, NW sec. 1-23-16. R.U.
Holcomb & Thomasson No. 1 Dillon, SE sec. 4-23-16. Swbg.
Holcomb & Thomasson No. 1 Smith, SE sec. 4-23-16. Drlg. 5,220 ft.
Magnolia Pet. Co. No. 1 D. F. Barr, NW S½ sec. 29-23-16. Comp.; flw. 10 B.P.H.; T.D. 6,060 ft.
R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. Comp.; 19,000,000 ft. gas; T.D. 5,980 ft.; P.B. from 11,486 ft.
R. W. Norton No. 8 Starke, NW sec. 17-23-16. Drlg. 100 ft.
R. W. Norton No. 9 Starke, NW sec. 17-23-16. Drlg. 3,556 ft.
R. W. Norton No. 12 Starke, NW sec. 17-23-16. Drlg. 3,687 ft.
R. W. Norton No. 14 Starke, C sec. 16-23-16. Drlg. 5,159 ft.
Roberts Drlg. Co. No. 1 E. G. Finley, NW sec. 1-23-16. Comp.; flw. 200 bbls. in 14 hrs.; T.D. 6,050 ft.
Standard Oil of La. No. 2 McCoy, sec. 10-23-16. Comp.; flw. 50 B.P.H.; T.D. 5,964 ft.
Standard Oil of La. No. 2 S. G. Zyiks, NW NW SW sec. 10-23-16. Cg. 5,890 ft.
United Gas No. 5 Starke, SE sec. 8-23-16. Drlg. 3,710 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSota O. & G. Co. No. 1 Ashley, SW SE sec. 15-16-10w. T.D. 5,625 ft.; perf. and tstg.; and acd.
H. L. Hunt and Seaboard Oil Co. No. 1 Commercial Real Estate Corp., NE NW sec. 3-16-6. Drlg. 5,086 ft.
Lide & Greer No. 2 Davis, NW NE sec. 12-16-5w. T.D. 7,355 ft.; S.W.; D.&A.

Bossier Parish

Arkansas-La. Gas Co. No. 2 T. Wilson, NW SW sec. 8-17-11. Comp.; flw. 30,000,000 ft. gas; T.D. 5,120 ft.
Triangle Drlg. Co. No. 1-A Schuler Est., SE NW sec. 13-17-12. T.D. 800 ft.; rng. 13-in.
United Gas No. 2-A A. J. Murff, NE sec. 19-17-11. 7-in. 4,967 ft.; cg. 5,120 ft.
United Gas No. 1-B A. J. Murff, SW sec. 17-17-11. Cg. 5,170 ft.

Caddo Parish

W. D. Ambrose No. 1 J. B. Files, SE NE SE sec. 10-20-15. T.D. 2,197 ft.; prep. set csg.
W. P. Clark No. 1 Dyer, C sec. 10-20-16. S.D. 300 ft.
L. J. Davis No. 1 Stiles, SE sec. 17-21-16. 8-in. 1,007 ft.; W.O.C.S.
W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. P.B. and tstg.; T.D. 5,413 ft.; S.G.; perf. 5,100-20 ft.; tstg.
La. Oil Prod. Co. No. 10-B Muslow, SW SE SW sec. 4-20-15. Drlg. 378 ft.
Frank Perkins No. 3 Stiles, SW sec. 33-21-16. Cg. 2,192 ft.
Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. Cg. 8,736 ft.
Stanolind O. & G. Co. No. 125 Dillon, NW

NE sec. 14-21-15. 7-in. 1,566 ft.; T.D. 1,720 ft.
Surf Maji Oil Co. No. 1 Satellete, NE SE sec. 10-20-15. Cg. 1,935 ft.
R. G. Trippett and D. C. R. Co. No. 3 Caddo, NE cor. sec. 16-19-14. Comp.; flw. 200 B.P.D.; T.D. 2,460 ft.

Claiborne Parish

Atlantic Ref. Co. No. 3 King, E½ SE SE sec. 35-21-5. Comp.; flw. 118 bbls. in 2 hrs.; T.D. 5,267 ft.
Atlantic Ref. Co. No. 4 F. B. King, W½ SE SE sec. 35-21-5. 10-in. 789 ft.
Atlantic Ref. Co. No. 1-A Tatum, N½ NE SE sec. 31-21-4. Drlg. 4,055 ft.
Atlantic Ref. Co. No. 1-B Tatum, W½ NW SW sec. 32-21-4. Drlg. 4,061 ft.
R. L. Bauman No. 2 M. S. Patton, N½ NW NE sec. 1-20-5. Drlg. 3,370 ft.
Gulf Ref. Co. No. 1 S. E. Tatum, SW cor. sec. 32-21-4. W.O.S.R.
Harry Hanbury No. 1-C Vaughn, S½ SE SE sec. 25-21-5. 7-in. 5,252 ft.; T.D. 5,-268 ft.; W.O.C.S.
Harry Hanbury No. 1-D Vaughn, S½ SW SW sec. 30-21-4. T.D. 5,310 ft.; tstg.
Hollifield & McFarland No. 3 M. Patton, E½ NW SE sec. 31-21-4. Comp.; flow 172 bbls. in 2 hrs.; T.D. 5,293 ft.
Hollifield & McFarland No. 4 M. S. Patton, E½ SW SE sec. 31-21-4. Drlg. 3,900 ft.
T. L. James No. 1 Baker, sec. 25-21-5. T.D. 5,222 ft.; W.O.S.R.
T. L. James No. 1 D. E. Fowler, W½ NE SW sec. 32-21-4. Drlg. 1,500 ft.
Love Bros. No. 2 J. J. Henry, N½ NE NE sec. 31-21-4. Drlg. 4,635 ft.
Lyons & Neely No. 2 J. Bean, E½ SE NE sec. 31-21-4. Drlg. 4,370 ft.
Magnolia Pet. Co. No. 6 English, S½ NE NW sec. 31-21-4. Drlg. 3,670 ft.
Magnolia Pet. Co. No. 4 H. E. Patton, S½ SE SW sec. 36-21-5. R.U.
Olson Drlg. Co. No. 1 J. T. Bean, S½ NW NW sec. 32-21-4. Comp.; flw. 60 B.P.H.; T.D. 5,166 ft.
Olson Drlg. Co. No. 2 J. T. Bean, N½ NW NW sec. 33-21-4. R.U.
Olson Drlg. Co. No. 1 T. F. Patton, SW C sec. 30-21-4. Tstg.
Olson Drlg. Co. No. 1-B T. F. Patton, S½ SE SW sec. 29-21-4. Drlg. 4,145 ft.
Scouts Oil Co. No. 1 E. C. English, S½ SW SE sec. 30-21-4. Drlg. 5,111 ft.
Sells Prod. Co. No. 1 J. Bean, W½ SW NW sec. 32-21-4. Comp.; flw. 55 bbls. in 2 hrs.; T.D. 5,195 ft.
Sells Pet. Co. No. 2 J. Bean, Jr., E½ SW NW sec. 32-21-4. 10-in. 818 ft.
Sells Pet. Co. No. 2 W. Jones, E½ SE SE sec. 31-21-4. 5-in. 5,300 ft.; T.D. 5,320 ft.
Sloan & Zook Co. No. 1 Patton Est., NE NW sec. 1-20-5. Drlg. 5,287 ft.; prep. acd.
Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. T.D. 5,438 ft.; tstg.
Standard Oil of La. No. 3 F. B. King, NW SE sec. 35-21-5. Comp.; flw. 40 B.P.H.; T.D. 5,300 ft.
Standard Oil of La. No. 4 F. B. King, sec. 35-21-5. Drlg. 385 ft.
J. C. Tippett No. 2 Aycock, S½ NE SE sec. 1-20-5. Drlg. 4,280 ft.
United Gas No. 2 Brownfield, 660 ft. N and E, SW NW sec. 5-19-5w. Drlg. 5,-730 ft.
United Gas et al No. 1 J. W. Stevenson, SE SW SE sec. 6-19-5. O.W.D.D.; T.D. 4,323 ft.; R.U.
G. H. Vaughn No. 1 E. B. King, S½ SE SE sec. 30-21-4. Drlg. 4,560 ft.

Concordia Parish

Coastal Mineral & Dev. Co. No. 1 Winsten, sec. 23-7-9e. Drlg. 1,760 ft.

De Soto Parish

Clear Lake Oil Co. No. 1 J. A. Woolums, NW sec. 29-12-12. Top ck. 1,188 ft.; S.D. 1,200 ft.
E. M. Harter No. 1 F. Giuque, SE NE SW sec. 26-11-11. Drlg. 1,985 ft.

LEGAL

U. S. Department of the Interior, General Land Office, Washington, D. C. Notice is hereby given that Unit No. 3, embracing NW¼ of SE¼ Sec. 5, T. 23 N., R. 15 W., 28.93 acres; Unit No. 4, SW¼ of NE¼ Sec. 2, T. 23 N., R. 16 W., 27.96 acres; Unit No. 5, W½ of E½, NE¼ of NW¼ Sec. 3, T. 23 N., R. 16 W., 135.13 acres; and Unit No. 6, SW¼ of SE¼ Sec. 9, T. 23 N., R. 16 W., 39.95 acres, in the Rodessa Oil and Gas Field, Caddo Parish, Louisiana, subject to consolidation if awarded to same bidder, are offered to the responsible qualified bidders of the highest bonus per acre under section 17 of the leasing act of February 25, 1920 (41 Stat. 437), as amended by the act of August 21, 1935 (49 Stat. 674), at the royalty rate scale in the lease form shown in Circular 1386, at a sale to be held in the Federal Court Room, Post Office Building, Shreveport, Louisiana, at 12:00 noon, on September 3, 1937. The successful bidder must deposit on the day of the sale a certified check on a solvent bank, or cash, for one-fifth of the amount of each bid and file the showing of qualifications to receive a lease required by section 7 of General Land Office Circular 1386. The remaining four-fifths, together with the annual rental in advance at the rate of $1 per acre must be paid prior to the issuance of the lease. The bidders are warned against violation of the provisions of section 59 of the United States Criminal Code approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids at the discretion of the Secretary of the Interior. Fred W. Johnson, Commissioner.

J. F. McMannan No. 1 Cook Ld. Co., SE sec. 16-16-11. T.D. 3,514 ft.; S.D.; W.O.
Paul Miller No. 1 R. A. Barron, sec. 36-11-11. T.D. 2,945 ft.; S.W.; arg. test.
Pullman Oil Co. No. 3 Ramsey, SE NE NW sec. 36-11-11. Comp.; 2,000,000 ft. gas; T.D. 2,492 ft.
Pullman Oil Co. No. 4 Ramsey, NE SW NW sec. 36-11-11. R.U.
Arthur D. Robinson No. 1 Allison, NW sec. 17-14-13. T.D. 3,002 ft.; D.&A.

Franklin Parish

Tensas Delta Oil Corp. No. 1 Woodland, NE sec. 22-11-9. Drlg. 580 ft.

LaSalle Parish

Petroleum Heat & Power Corp. No. 1 P. S. Gahoran, SW NW sec. 25-10-1e. Comp.; pmp. 5 B.P.D.; T.D. 1,513 ft.
Placid Oil Co. No. 4 La. Cen. Lbr. Co., SW sec. 15-10-3e. T.D. 1,814 ft.; D.&A.

Lincoln Parish

J. E. Burford, Sr., No. 1 Hanna, SE SW SE sec. 34-18-4w. Drlg. 4,537 ft.
Crown Cen. Pet. Co. No. 2 T. F. Patton, S½ SE NW sec. 6-20-4. Drlg. 3,650 ft.
Gigantic Oil Co. No. 1 R. L. Sanderson, NW SE NW sec. 30-18-1w. R.U.
Hollifield & McFarland No. 1 J. D. Caruthers, S½ NE NW sec. 6-20-6. Drlg. 4,744 ft.
T. L. James No. 1 J. J. Spence, SW NE sec. 11-17-4. Drlg. 5,465 ft.
W. F. Lacey No. 2 T. F. Patton, E½ NW NE sec. 6-20-4. Drlg. 1,520 ft.
Ludel Oil Corp. No. 1 Gill, NE NE NW sec. 36-20-2w. Drlg. 2,590 ft.
Lyons & Neely No. 1 W. H. Patton, N½ SW NW sec. 6-20-4. 5-in. 5,281 ft.; T.D. 5,312 ft.
Lyons & Neely No. 1 H. E. Patton, N½ NE SW sec. 6-20-4. Drlg. 801 ft.
Magnolia Pet. Co. No. 1 F. Corbin, W½ NE NE sec. 6-20-4. R.U.
Olsen Drlg. Co. No. 1 Aycock, N½ SW SW sec. 6-20-4. Fsg. for D.S. 4,145 ft.

Red River Parish

Gulf Ref. Co. No. 28 L. E. Kennedy, NW sec. 25-13-11. 6-in. cmtd. 2,485 ft.
W. J. Hunter No. 2 Long Bell Lbr. Co., SW NW sec. 20-19-9. S.D. 2,000 ft.
J. C. Prine No. 1 Haynes, SW sec. 20-13-10. Hole clean; cmtd. 4-in. 2,502 ft.; T.D. 5,220 ft.; W.O.C.S.

Sabine Parish

Kirk-Green-Way Inc. No. 1 Whitney Corp., NW NE sec. 8-9-13. P.B. to 3,800 ft. and tstg. S.W.; D.&A.

Webster Parish

Magnolia Pet. Co. No. 4 Aarnes-Cox, NW sec. 22-21-10. Drlg. 3,480 ft.
Magnolia Pet. Co. No. 2 A. J. McCook, SW sec. 22-21-10. 7-in. 8,103 ft.; T.D. 2,293 ft.
Ohio Oil Co. No. 47 Bodcaw Acct. 2, SW SE sec. 15-21-10. Drlg. 7,074 ft.
Ohio No. 1 S. P. D. Covle and W. Cox, SW SW SE sec. 23-21-10. Drlg. 5,128 ft.
Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drlg. 7,202 ft.
Ohio No. 7-B R. L. Holloway 586 ft. N. 756 ft. E line, sec. 23-21-10. Drlg. 6,945 ft.
A. G. Olinhant et al No. 1 Banks, NE NE sec. 34-21-10. Drlg. 6,351 ft.
Ohio Oil Co. No. 1 D. W. Merritt, SW cor. sec. 14-21-10. Drlg. 4,365 ft.
Standard Oil Co. of La. No. 7 Mrs. M. F. Davis, NE NE NW sec. 23-21-10. Drlg. 4,207 ft.
Standard Oil Co. of La. No. 2-B Mrs. M. E. Gray, NE NE NW sec. 26-21-10. Drlg. 4,418 ft.
Standard Oil of La. No. 1 E. L. Stewart SE SE SE sec. 32-21-10. Reperf. and tstg.

Winn Parish

G. W. Zeigen No. 11 La. Cen. Lbr. Co., NW sec. 11-13-1e. T.D. 1,769 ft.; D.&A.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Brookshire, sec. 66-12s-3e. T.D. 11,342 ft.; 7⅝-in. csg. on bttm.

Anse La Butte—St. Martin Parish

Crusader Pet. Co. No. 3-B Begnaud. Drlg. sd. 2,626 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc et al No. 1 Wurzlow, sec. 17-22s-18e. T.D. 10¾-in. csg. 1,008 ft.; bailed S.W.; tried to blow out; hole bridged; S.D.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 4 Wilbert, sec. 74-9s-10w. R.U.

Bayou Cocotriz—Terrebonne Parish

Shell Pet. Corp. No. 2 Pelican, sec. 19-17s-15e. Drive piling.
Shell Pet. Corp. No. 3 Pelican, sec. 19-17s-15e. Drive piling.

Big Lake—Cameron Parish

Union Sulphur Co. No. 1 Henry Hebert, sec. 18-12s-8w. T.D. 9,212 ft.; conditioning mud.
Union Sulphur Co. No. 1 P. J. Herbert, sec. 18-12s-8w. T.D. 8,449 ft.; 6⅝-in. csg. 8,441 ft.

Black Bayou—Calcasieu Parish

Shell Pet. Corp. No. 38 Watkins. Drlg. sdy. sh. 4,489 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 51 State, sec. 19-23s-20e. T.D. 3,694 ft.; 7-in. csg. 3,655 ft.; I.P. 793 B.P.D.; ⅝-in. ck.

Cameron Meadows—Cameron

Magnolia-Humble O. & R. Co. No. 20 Cameron Meadows, sec. 21-14s-13w. T.D. 5,268 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 1 Landry, sec. 25-13s-9e. Drlg. sd.&sh. 8,799 ft.
Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drlg. sd.&sh. 8,317 ft.
Pan American Prod. Co. No. 1 Veeder, sec. 30-13s-10e. Drlg. sh.&L. 9,368 ft.
Pan American Prod. Co. No. 1 Veeder-Hunt, sec. 30-13s-10e. Drlg. sh. 7,295 ft.

Choctaw—Iberville Parish

Standard Oil Co. No. 10 Grove, sec. 52-9s-11e. T.D. 5,303 ft. in salt; D.S. stck.
Standard Oil Co. No. 7 Gay, sec. 52-9s-11e. Cmtd. 13⅜-in. csg. 956 ft.; T.D. 3,009 ft.; straightening hole.

Darrow—Ascension Parish

Humble O. & R. Co. No. 16 Community, sec. 29-10s-2e. Drk.
Humble O. & R. Co. No. 11 Gumble, sec. 35-10s-2e. Drlg. sh. 2,971 ft.
Kiva Oil Co. No. 1 Duplessis, sec. 69-10s-2w. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 18 State, sec. 5-22s-16e. Drlg. sh.&sd. 7,564 ft.

Edgerly—Calcasieu Parish

Crusader Pet., Inc., No. 1 Miller Bros., sec. 27-9s-11w. Drlg. sd. 5,393 ft.

Fausse Point—Iberia Parish

Texas Co. No. 3 State, sec. 35-11s-8e. T.D. 4,524 ft.; P.B. and sdtrkd. 2,904 ft.; drlg. sh. 3,885 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. T.D. 6,946 ft.; D.S. stuck.

Garden Island—Plaquemines Parish

Texas Co. No. 22 State, sec. 37-23s-33e. Core sd. 4,964 ft.

Gillis—Calcasieu Parish

Union Sulphur Co. No. 3 Bel, sec. 2-9s-8w. Drlg. sdy. sh. 6,873 ft.
Union Sulphur Co. No. 8 Castle, sec. 13-9s-8w. T.D. 7,153 ft.; 5-in. csg. 7,153 ft.; flwd. oil and S.W.; set retainer; tstg.

Hackberry—Cameron Parish

W. T. Burton No. 3 Lewis, sec. 22-12s-10w. R.U.
W. T. Burton No. 4 Vincent, sec. 22-12s-10w. Drlg. sh. 3,015 ft.
Stanolind O. & G. Co. No. 1-B Duhon, sec. 27-12s-10w. T.D. 6,233 ft.; 7-in. csg. 5,-815 ft.; perf. 5,761-75 ft.; swbg.
Stanolind O. & G. Co. No. 5 Duhon, sec. 22-12s-10w. T.D. 4,875 ft.; 7-in. csg. 4,-798 ft.; flwd. 172 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 8 Carter & Sweeney, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 9 Carter & Sweeney, sec. 22-12s-10w. Drlg. sh. 5,-426 ft.
Stanolind O. & G. Co. No. 10 Carter & Sweeney, sec. 22-12s-10w. Drk.
Stanolind O. & G. Co. No. 52 State, sec. 22-12s-10w. T.D. 4,910 ft.; 7-in. csg. 4,-836 ft.; swbg.
Stanolind O. & G. Co. No. 53 State, sec. 22-12s-10w. 10¾-in. csg. 1,930 ft.; drlg. sh.&L. 5,380 ft.
Texas Co. No. 23-B State, sec. 12-12s-9w. T.D. 5,448 ft.; P.B. 2,409 ft.; drlg. L. 5,030 ft.
Union Sulphur Co. No. 9 Doiron, sec. 37 12s-10w. 5-in. csg. 6,176 ft.; S.D. 6,191 ft.

Iowa—Jefferson Davis Parish

Magnolia Pet. Co. No. 12 Wait. T.D. 5,300 ft.; W.O.C.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. 9⅝-in. csg. 7,030 ft.; T.D. 9,765 ft. P.B. and sdtrkd.; drlg. sd.&sh. 9,200 ft.
Herton Oil Co. No. 5 Roans, sec. 40-13s-9e. Drlg. sh. 5,291 ft.

Jennings—Acadia Parish

Frank W. Bennett et al No. 1 Brethern and Christ Church, sec. 41-7s-2w. T.D. 4,875 ft.; P.B. 4,450 ft.; drlg. sh. 6,509 ft.
W. T. Burton No. 3 J. J. Roboria, sec. 41-9s-2w. Drlg. sd.&sh. 5,648 ft.
Cosmo Pet. Co. No. 1 M. E. Crusel, sec. 42-9s-2w. Drlg. sh. 6,809 ft.
D. D. Feldman et al No. 1 McFarlain, sec. 41-9s-2w. T.D. 6,840 ft.; 7-in. csg. 6,-700 ft.
Glassell No. 1 Bourgeaux, sec. 41-9s-2w. T.D. 6,633 ft.; P.B. 5,452 ft.; prep. S.T.
Glassell & Glassell No. 3 McFarlain, sec. 41-9s-3w. Spd.
Glassell No. 3 Trushell, sec. 42-9s-2w. cmtd. 7-in. csg.; perf. 6,788-6,844 ft.; I.P. 550 B.P.D.; 12/64-in. ck.
La. Crusader No. 108 Houssiere Latreille, sec. 47-9s-2w. T.D. 2,102 ft.; I.P. 25 B. P.D.
Louisiana Crusader Oil Co. No. 1 Lake Oil fee, sec. 45-9s-2w. Drlg. sh. 1,254 ft.
R. W. O'Merara No. 1 McFarlain, sec. 41-9s-2w. Drlg. shly. sd. 5,733 ft.
Port City Oil Co. No. 2 Jennings-Heywood, sec. 41-9s-2w. T.D. 2,050 ft.; 5⅝-in. csg. 2,034 ft.; I.P. 100 B.P.D.
Reiter-Foster Oil Co. No. 1 Cockrell et al, sec. 42-9s-2w. Cap rock 4,157 ft.; P.B. 3,157 ft.; perf. csg. 3,126-36 ft.; swbd. sd. and S.W.; S.D.
Superior Oil Co. No. 5 Leckelt, sec. 42-9s-2w. Drlg. sd.&sh. 5,569 ft.
Superior Oil Co. No. 6 Leckelt, sec. 42-9s-2w. T.D. 7,225 ft.; 7-in. csg. 7,009 ft. tstg.
Superior Oil Co. No. 2 Morest, sec. 41-9s-2w. Drlg. sdy. L. 6,339 ft.
Superior Oil Co. No. 3 Morest, sec. 41-9s-2w. Drlg. sd.&L. 5,607 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 Wurzlow, sec. 8w. R.U.

Lafitte—Jefferson Parish

Texas Co. No. 7 L.L.E., sec. 20-17s-24w. Drk.
Texas Co. No. 2 Milling, sec. 20-17s-24e. Drlg. sdy. sh.&L. 7,276 ft.
Texas Co. No. 1 State-Bayou Norman, sec. 28-17s-24e. Drlg. sdy. sh. 10,434 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 141 State, sec. 40-21s-19e. Drlg. Anhy. 1,758 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 13-18s-25e. Drlg. wtr. sd. 7,031 ft.

Lake Washington—Plaquemines Parish

Humble O. & R. Co. No. 25 Cockrell, sec. 35-20s-26e. T.D. 2,530 ft.; fsg.

Leesville—Lafourche Parish

Texas Co. No. 66 Leesville, sec. 26-21s-22e. Drlg. wtr. sd. 3,387 ft.

Long Lake—Lafourche Parish

Fohs Oil Co. No. 2 State, sec. 65-17s-19e. R.U.
Fohs Oil Co. No. 3 State, sec. 65-17s-19e. 10¾-in. csg. 2,743 ft.

New Iberia—Iberia Parish

Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. T.D. 5,019 ft.; P.B. and sdtrkd.; drlg. sh. 5,294 ft.
Texas Co. No. 3 Bryant, sec. 25-12s-7e. R.U.
Wm. Hellis No. 9 Bernard, sec. 54-12s-7e. T.D. 5,126 ft.; P.B. sdtrkd.; drlg. sh.& L. 2,283 ft.
Wm. Hellis No. 10 Bernard, sec. 54-12s-7e. R.U.
Wm. Hellis No. 6 Bullock-Burke, sec. 25-12s-7e. Drlg. sh. 3,602 ft.
Texas Co. No. 3 Coleste, sec. 25-12s-7e. Drlg. sdy. sh. 5,009 ft.
Texas Co. No. 3 Duhe, sec. 26-12s-7e. T.D. 5,064 ft.; 7-in. csg. 4,760 ft.
Texas Co. No. 7-B Hansen, sec. 54-12s-7e. R.U.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. et al No. 1 T.R.S. Farms Co., sec. 23-10s-4w. T.D. 9,151 ft.; 7-in. csg. on bttm.; perf. csg. 9,136-40 ft.; tstd. dry gas.

Starks—Calcasieu Parish

Lutcher Moore No. 2 fee, sec. 19-9s-12w. Drlg. sd.&sh. 1,877 ft.
Turnbull et al No. 2 Industrial Lbr. Co., sec. 19-9s-12w. T.D. 4,861 ft.; S.D.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 847 fee, sec. 29-9s-10w. Drlg. sh. 5,436 ft.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 5 Smedes, sec. 57-11s-6e. Drlg. sd.&sh. 4,062 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 2 Vincent and Welch, sec. 29. Drlg. sh. 7,080 ft.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 8 Harang, sec. 9-17s-20e. T.D. 7,504 ft.; P.B.; sdtrkd.; drlg. sh. 4,312 ft.
Pan American Prod. Co. No. 9 Harang, sec. 9-17s-20e. Drlg. sh. 6,837 ft.
Pan American Prod. Co. No. 10 Harang, sec. 7-17s-20e. Drlg. 2,730 ft.

Venice—Plaquemines Parish

Tide Water Oil Co. No. 4 Manhattan Fruit Co., sec. 26-21s-30e. Dredge canal.

Vinton—Calcasieu Parish

Katina Oil Co. No. 2 Vincent, sec. 34-10s-12w. Drlg. sd. and gravel 850 ft.
Superior Oil Co. No. 1 Gray, sec. 4-11s-12w. Drlg. sd.&sh. 4,449 ft.

White Castle—Iberville Parish

T. D. Humphray No. 1 E. B. Adams, sec. 1-11s-12e. Drk.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. Drlg. sdy. sh. 4,380 ft.
Humble O. & R. Co. No. 1 Floyd Williams, sec. 34-8s-1e. T.D. 9,339 ft.; P.B. 8,750 ft.
Humble O. & R. Co. No. 1 R. A. Sarver, sec. 35-10s-1e. M.I.M.
T. S. Markley No. 1 Daigle, sec. 19-7s-2e. T.D. 3,896 ft.; fsg.

Calcasieu Parish

D. & D. Oil Co. No. 2 Lutcher-Moore, sec. 1-8s-13w. Drlg. sdy. L. 6,641 ft.

Cameron Parish

Humble O. & R. Co. No. 1 Miami Corp., sec. 8-14s-5w. Drk.
Pure Oil Co. No. 2 State, sec. 14-13s-3w. Drlg. sdy. sh. 7,350 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State-Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w. M.I.R.; bldg. drk.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-9s-2e. T.D. 6,127 ft.; D.S. stuck.

Evangeline Parish

Continental Oil Co. No. 1 Tate, sec. 44-3s-2e. Drlg. sdy. L. 8,771 ft.
Schlicher Prod. Co. No. 1 Denois Ld. & St. Stone Co., sec. 35-3s-1w. 13⅜-in. csg. 720 ft.; drlg. sh. 785 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 414 State Lake

Pigneur, Twp. 12s-5e. T.D. 7,071 ft.; swbd. S.W. and S.O.; S.D.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. Drlg. sh.&L. 3,340 ft.

Jefferson Davis Parish

Stanolind O. & G. Co. No. 2-B Calcasieu Natl. Bank, sec. 28-7s-3w. 13⅜-in. csg 1,950 ft.; T.D. 9,851 ft.; P.B. 8,954 ft.; tstg. sd. 8,956-65 ft.; flwg. 2½ bbls. of dist. per hr.; ⅝-in. ck.

Lafourche Parish

Amerada Pet. Corp. No. 1 South Coast Corp., sec. 34-15s-19e. R.U.

Gulf Oil Corp. No. 3 State P.P., sec. 36-23s-21e. Recvd. 1,000 ft. of oil on 6-min. D.S:T. at 6,740-6,846 ft.; T.D. 6,848 ft.; rng. csg.

Livingston Parish

Grubb et al No. 1 Evans, sec. 47-7s-2e. T.D. 7,656 ft.; D.S. stuck.

Plaquemines Parish

Humble O. & R. Co. No. 4 Orleans Levee Bd., sec. 11-18s-15e. Drlg. L. rk. 695 ft.

Gulf Oil Corp. No. 3 State (Jackson dist). S.D. 923 ft.

St. Bernard Parish

Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; S.D. 3,440 ft.

St. Martin Parish

Texas Co. No. 10 St. Martin, sec. 15-8s-7e. Drlg. sd.&sh. 3,880 ft.

St. Mary Parish

Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. T.D. 10,541 ft.; 7⅝-in. csg. 10,515 ft.; drlg. plug.

Terrebonne Parish

Barnsdall Oil Co. No. 1 Dilbert, Stark & Brown Sur., sec. 110-16s-15e. Driving piling.

Vernon Parish

Castor Creek Drlg. Co. No. 1 Llano Del Rio, Inc., sec. 34-2n-9w. Drk.

TEXAS

Week Ending August 28

GULF COAST FIELDS

Hastings—Brazoria County

Humble O. & R. Co. No. 2 Alexander, H. T.&B. Sur. No. 28. T.D. 6,010 ft.; I.P. 610 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 6-B Cecil Brown, C Lot 86, Perry & Austin Sur. T.D. 6,053 ft.; I.P. 645 B.P.D.; ¾-in. ck.

Humble O. & R. Co. No. 16 Cecil Brown, W. H. Snyder Sur. T.D. 5,320 ft.; prep. to S.T.

Humble O. & R. Co. No. 2 Schindler. T.D. 5,655 ft.; P.B.; sdtrkd.; drlg. sh. 4,952 ft.

Humble O. & R. Co. No. 4 South Texas Grain Co., Lot 93, Perry & Austin Sur. T.D. 6,110 ft.; I.P. 583 B.P.D.; ¼-in. ck.

Humble O. & R. Co. No. 1 R. P. Woods, Perry & Austin Sur. Drlg. sd. 2,155 ft.

Jay Simmons No. 1 G. H. Alexander, H. T.&B. Sur. No. 28. Drlg. sh. 3,710 ft.

Stanolind O. & G. Co. No. 3 Condon, H. T.&B. Sur., sec. 29. T.D. 5,900 ft.; 7-in. csg. 5,895 ft.; I.P. 632 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 12-B Drake, H. T.&B. Sur. No. 36. T.D. 6,073 ft.; tstg.

Stanolind O. & G. No. 12 H. H. Ford, H. T.&B. Sur. No. 29. Drlg. sh. 4,423 ft.

Stanolind O. & G. Co. No. 4 Martha Long, H.T.&B. Sur. No. 29. T.D. 1,267 ft.; cmtd. 10¾-in. surf. csg. 1,264 ft.; T.D. 5,735 ft.; I.P. 562 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 1 Matsushita, H. Stevens Sur. 10¾-in. csg. 1,255 ft.

Stanolind O. & G. Co. No. 4 McKibben, H.T.&B. Sur. No. 29. T.D. 5,901 ft.; 7-in. csg. 5,898 ft.; I.P. 627 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 16 Paul, A.C. H.&B. Sur. No. 2. Drlg. L. 4,360 ft.

Stanolind O. & G. Co. No. 1 Randall, A.C. H.&B. Sur. No. 2, Lot 29. Drlg. sd.& bldrs. 2,632 ft.

Stanolind O. & G. Co. No. 8 L. D. Shaw, H.T.&B. Sur. No. 36. T.D. 6,080 ft.; 7-in. csg. 6,074 ft.; I.P. 601 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 9 Sneed, A.C. H.&B. Sur. No. 2. T.D. 6,080 ft.; 7-in. csg. 6,074 ft.; I.P. 610 B.P.D.; ¼-in. ck.

Stanolind O. & G. Co. No. 10 Sneed, A.C. H.&B. Sur. No. 2. T.D. 6,120 ft.; 7-in. csg. on bttm.; abd.

Stanolind O. & G. Co. No. 12 Gilbert Sneed, A.C.H.&B. Sur. No. 2. Drk.

Stanolind O. & G. Co. No. 5 Surface, B.B. B.&C. Sur. T.D. 6,082 ft.; run screen.

Stanolind O. & G. Co. No. 10 Turner, A. C.H.&B. Sur. No. 1. Drlg. sh. 357 ft.

Stanolind O. & G. Co. No. 1 Wagner Sparks, H.T.&B. Sur. No. 29. T.D. 6,080 ft.; 7-in. csg. 6,079 ft.

Stanolind O. & G. Co. No. 5 Wooster. A. C.H.&B. Sur. No. 1. Drlg. L. 5,168 ft.

Lockridge—Brazoria County

Gulf Oil Corp. No. 3 Baker, J. W. Hall Sur. R.U.

Gulf Oil Corp. No. 1 Great Southern, E. D. Robertson Sur. S.D. 3,050 ft.

Kirby Pet. Co. No. 1 Baker. J. W. Hall Sur. T.D. 6,369 ft.; 7-in. csg. 6,368 ft.; tstd. dist.; drlg. plug.

Dr. C. M. Lusk No. 1 Ramsey State Farm, J. W. Hall Sur. T.D. 6,269 ft.; S.D.

Shell Pet. Corp. No. 1-B Ramsey, J. W. Hall Sur. T.D. 6,374 ft.; P.B. T.D. 6,367 ft.; set retainer.

Manvel—Brazoria County

F. D. Jones et al No. 1-A Bankers Mtg., E. Little Sur., Lot 75. Drk.

Texas Co. No. 3 W. O. Morrison, A.C.H.& B. Sur. No. 91. Drlg. sd.&L. 5,338 ft.

Texas Co. No. 4-B Way, Thos. Spraggin Sur. T.D. 4,127 ft.; 7-in. csg. 4,127 ft.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Larsen, C. Breen Sur. Drlg. sd. 10,069 ft.

Harrison & Abercrombie No. 1 Smith, C. Breen Sur. Drlg. sh. 2,798 ft.

Sandy Point—Brazoria County

H. J. De Arman No. 2 J. A. Fite, D. Talley Sur. R.U.

West Columbia—Brazoria County

Texas Co. No. 16 Abrams, G. Tenille Sur. T.D. 5,604 ft.; 7-in. csg. 5,490 ft.; I.P. 624 B.P.D.; ¼-in. ck.

Texas Co.-Sterling O. & R. Co. No. 2 Phillips, G. Tennille Sur. T.D. 5,636 ft.; 7-in. csg. 5,578 ft.; flwd. 156 bbls. in 2 hrs.; ½-in. ck.

Texas Co. No. 3 Phillips, G. Tennille Sur. R.U.

Texas Co. No. 1 T. L. Smith, G. Tennille Sur. T.D. 1,158 ft.; run surf. csg.

Calhoun—Heyser—Victoria County

Geo. Echols No. 6 W. H. Bennett, J. E. Galban Sur. T.D. 5,749 ft.; 7-in. csg. 5,738 ft.

Gulf Oil Corp. No. 1 Schultz, J. E. Galban Sur. R.U.

Gulf Oil Corp. No. 1 T. P. Traylor, J. E. Galban Sur. R.U.

Humble O. & R. Co. No. 3 Marshall, A. Sisneros Sur. T.D. 702 ft.; W.O.C.

Magnolia Pet. Co. No. 1 Lander, Galban Sur. T.D. 5,750 ft.; I.P. 41 bbls. in 6 hrs.; 9/64-in. ck.

Normandie Oil Co. No. 3 Cook, A. Sisneros Sur. T.D. 5,599 ft.; run csg.

Portilla Drlg. Co. No. 2-B Welder, J. M. Rios Sur. Drlg. sh. 5,300 ft.

Sinclair Prairie Oil Co. No. 6 Bennett, A. Sisneros Sur. Drlg. sh. 3,950 ft.

Sun Oil Co. No. 1 Coffey, J. Gabban Sur. T.D. 5,747 ft.; 7-in. csg. 5,740 ft.; tstg.

Anahuac—Chambers County

Humble O. & R. Co. No. 12 Johnson, sec. 47, H.&T.C. Sur. T.D. 7,080 ft.; 5½-in. csg. 7,050 ft.

Humble O. & R. Co. No. 18 Tyrell, sec. 52, H.&T.C. Sur. T.D. 7,085 ft.; 5½-in. csg. 7,057 ft.

Humble O. & R. Co. No. 4 Wilcox, sec. 50, H.&T.C. Sur. Drlg. shly. sd. 7,085 ft.

Cotton Lake—Chambers County

Salt Dome Oil Corp. No. 2-B Lawrence, S. Barrow Sur. 10¾-in. csg. 1,119 ft.; T.D. 6,510 ft.; 7-in. csg. 6,505 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 3 Acorn, H.T.&B. Sur. 103. 13⅜-in. csg. 1,393 ft.

Sun Oil Co. No. 1 Jackson, Yarbo Sur. T.D. 8,580 ft.; P.B. 8,500 ft.; cutting and pulling tbg.; squeeze cmt. 8,513-50 ft.; run 7-in. csg.

Turtle Bay—Chambers County

Stanolind No. 4-A Middleton, S. Burney Sur. Drlg. sh. 6,497 ft.

Stanolind O. & G. Co. No. 3 Middleton, Carroll Sur. T.D. 6,600 ft.; 7-in. csg. 6,589 ft.; flwd. 196 bbls. in 12 hrs.; ¼-in. ck.

Stanolind O. & G. Co. No. 1 Morrisey, M. A. Carroll Sur. T.D. 6,625 ft.; 7-in. csg. 6,610 ft.; swbg.

Stanolind O. & G. Co. No. 2 Wm. Cooper Hrs.; S. Burney Sur. T.D. 6,603 ft.; run 7-in. csg.

Stanolind O. & G. Co. No. 1 Silva, S. Burney Sur. R.U.

Sun Oil Co. No. 6 Chambers, M. A. Carroll Sur. Drlg. sh.&L. 5,854 ft.

Garwood—Colorado County

Coyle-Concord No. 2 Mary South, sec. 41, I.&G.N. Sur. Cmtd. 10⅝-in. csg. 628 ft. drlg. sh. 5,206 ft.

Blue Ridge—Fort Bend County

Texas Gulf Prod. Co. No. 17 Blakely, Lot 9, Blk. C, E. Drew Sur. T.D. 4,470 ft.; 5-in. csg. 4,270 ft.; I.P. 456 B.P.D.; ¼-in. ck.

Orchard—Fort Bend County

Gulf Oil Corp. No. 53 Moore, J. Frazier Sur. Drlg. 2,634 ft.

Gulf Oil Corp. No. 54 Moore, J. Frazier Sur. T.D. 3,167 ft.; I.P. 197 B.P.D.; ¼-in. ck.

Dickinson—Galveston County

Atlantic Ref. Co. No. 2 Anderson, W. G. Banks Sur. Drk.

Atlantic No. 3 Hutchins, P. G. Merritt Sur. T.D. 8,174 ft.; 7-in. csg. on bttm.; I.P. 23 B.P.D.; ¼-in. ck.

Bennett-Kenyon Oil Co. No. 2 B. Schroeder, W. G. Banks Sur. R.U.

Humble O. & R. Co. No. 1 Leake, W. K. Wilson Sur. T.D. 8,115 ft.; cmtd. 7-in. csg.; perf. csg. 8,035-40 ft.; I.P. 620 B. P.D.; ¼-in. ck.

Humble O. & R. Co. No. 1 Mulley. T.D. 8,780 ft.; run csg.

Ken-Ben Oil Co. No. 5 Stewart, W. K. Wilson Sur. Drlg. sh. 3,537 ft.

Pure Oil Co. No. 2-B Hutchens, P. G. Merritt Sur. 7-in. csg. 8,104 ft.

Pure Oil Co. No. 3-B J. W. Shelor, W. G. Banks Sur. R.U.

Stanolind O. & G. Co. No. 3 Damiani, W. K. Wilson Sur. Drlg. sh.&L. 8,400 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 10 B.&O., M. Dunman Sur. 10¾-in. csg. 1,315 ft.; S.D. 3,046 ft.

Stanolind O. & G. Co. No. 62-A Cade, M. Fitzsimmons Sur. T.D. 5,800 ft.; P.B. and sdtrkd.; T.D. 5,413 ft.; 7-in. csg. 5,413 ft.

Stanolind O. & G. Co. No. 63 Cade, M. Dunman Sur. R.U.

Stanolind O. & G. Co. No. 1 C. E. Smith, M. Dunman Sur. Drlg. sh. 6,822 ft.

Silsbee—Hardin County

Republic Prod. Co.-Houston Oil Co. No. 19 Brooks, G. W. Brooks Sur. T.D. 6,905 ft.; 7-in. csg. 6,895 ft.; I.P. 314 B.P.D.; ¼-in. ck.

Republic Prod.-Houston Oil Co. No. 20 Brooks, G. W. Brooks Sur. T.D. 6,915 ft.; 7-in. csg. 6,909 ft.

Republic-Houston Oil Co. No. 21 Brooks fee, G. W. Brooks Sur. Drlg. sh.&sd. 3,135 ft.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 A. S. Moody, Reels & Trobough Sur. 10¾-in. csg. 2,522 ft.; drlg. sh. 3,721 ft.

Friendswood—Harris County

V. H. Borsodi No. 2 V. R. Taylor, T. Choate Sur. Spd.

Humble O. & R. Co. No. 1 Louise Beamer, Thos. Choate Sur. Top oil sd. 5,769 ft.; core sd. 5,776 ft.

Goose Creek—Harris County

Gulf Oil Corp. No. 7 Hirsch State Ld., Wm. Scott Lower Lge. Spd.

South Houston—Harris County

Stanolind O. & G. Co. No. 2 Mrs. Minnie Barrett et al, Unit 2, H.T.&B. Sur. No. 6. T.D. 1,480 ft.; cmtd. 9⅝-in. surf. csg. 1,476 ft.; T.D. 4.075 ft.; 5¾-in. csg. 4,050 ft.

Stanolind O. & G. Co. No. 2 H. L. Bennett et al, Unit 13, H.T.&B. Sur. No. 6. T.D. 1,480 ft.; run surf. csg.

Stanolind O. & G. Co. No. 2 H. G. Funk, Callahan and Vince Sur. 9⅝-in. csg. 1,479 ft.; drlg. sh. 2,632 ft.

Tomball—Harris County

Humble O. & R. Co. No. 1 Thomas, J. Pruitt Sur. Drlg. sh. 803 ft.

Mabee Drlg. Co. No. 3 W. Baker, J. House Sur. T.D. 955 ft.; W.O. csg.

Edna—Jackson County

Steinberger Pet. Corp. No. 2 Druschell, Rodriguez Sur. Drlg. sh.&L. 3,600 ft.

Ganado—Jackson County

Texas Co. No. 1 C. E. Niebuhr, Morris & Cummings Sur. No. 4. Drlg. sh. 5,080 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 4 Langham, C. Williams Sur. T.D. 6,810 ft.; abd.

Humble O. & R. Co. No. 9 Phelan, C. Williams Sur. Run 9⅝-in. csg.; T.D. 1,031 ft.

Humble O. & R. Co. No. 1 W. D. Sunter, C. Williams Sur. T.D. 6,785 ft.; perf. csg. 6,775-77 ft.; fsg.

Glenn H. McCarthy No. 5-A Longe, H. Williams Sur. R.U.

Stanolind O. & G. Co. No. 7 Sargl, H. Williams Sur. Drlg. sh. 6,020 ft.

Sun Oil Co. No. 2 Galley, A. Houston Sur. Drlg. sd.&sh. 2,034 ft.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2 May Fitzhugh, Wm. McFadden Sur. T.D. 4,047 ft.; 10¾-in. csg. 4,040 ft.

Stanolind O. & G. Co. No. 4-A Pipkin T.&N.O. Sur. Sh. 5,416 ft.; D.S. stuck; P.B. 5,005 ft.; W.O.C.

Fannett—Jefferson County

Gulf Oil Corp. No. 1 Junker-Spencer, W. H. Smith Sur. Spd.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur. 18⅝-in. csg. 109 ft.; 9⅝-in. csg. 8,538 ft.; T.D. 9,951 ft.; 7-in. csg. 9,951 ft.; core 10,048 ft.

Nome—Jefferson County

Sun Oil Co. No. 5 Long, J. Blair Sur. R.U.

Sun Oil Co. No. 10 Paggi Est., J. W. Kirby Sur. T.D. 6,045 ft.; I.P. 251 B.P.D.; ¼-in. ck.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 2 Phelan, S. Stevens Sur. Drlg. sh. 8,030 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 1 Neville, J. Pleasants Sur. Drlg. sh. 1,830 ft.

Hankamer—Liberty County

Gulf Oil Co. No. 25 E. W. Boyt, Amos Allen Sur. Sd. 5,983 ft.; D.S.T. rec. 50 ft. mud and no oil or wtr.

Hardin—Liberty County

Jack Frazier No. 1-A Lynott & Buffam, J. Robeson Sur. R.U.

Shell Pet. Corp. No. 1 Cessna, H. B. Johnson Sur. Drlg. sh.&L. 6,938 ft.

L. W. Wickes No. 1 Lynott Buffman, J. Robinson Sur. Abd. 7,703 ft.

Woodley Pet. Co. No. 2 W. McMurtay, H. B. Johnston Sur. T.D. 1,694 ft.; P.B. 1,680 ft.; sdtrkd.; drld. to 4,480 ft.

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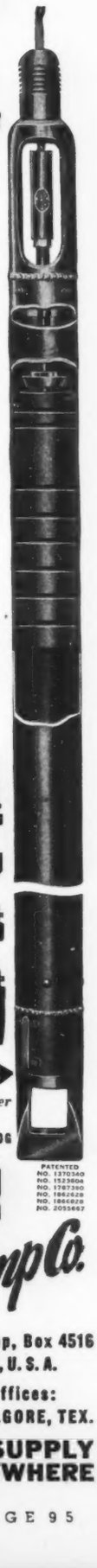

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- **SAND BOTTOM** — Used when tools are run and when well is shot to quickly remove loose material.
- **STAR BOTTOM** — Used for cutting the sand loose.
- **CHISEL BOTTOM** (In Pump) — With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

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See Page 1186 COMPOSITE CATALOG

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FOR SALE BY SUPPLY STORES EVERYWHERE

Hull—Liberty County

Republic-Houston Oil Co. No. 163 Dolbear, J. Devore Sur. Drlg. gbo. 425 ft.
Texas Co. No. 8 Hannah fee, J. Devore Sur. T.D. 5,249 ft.; P.B. 3,800 ft.; sdtrkd; drld. 4,200 ft.
Texas Co. No. 9 Hannah fee, J. Devore Sur. T.D. 2,778 ft.; P.B. to S.T. at 2,541 ft.; drlg. L. 4,407 ft.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 H. E. Thompson, Hall Sur. R.U.

Buckeye—Matagorda County

United North & South Dev. Co., B. Cotton Sur. R.U.
United North & South Development Co. No. 1 G.B.M., Cotton Lge. T.D. 8,667 ft.; 7-in. csg. 8,667 ft.; W.O.C.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Top salt 796 ft.; base salt 2,099 ft., 18⅝-in. csg. 2,174 ft.; 13⅜-in. csg. 3,700 ft.; 9⅝-in. csg. 5,689 ft.; T.D. 5,969 ft.; hole cleaned; P. B. and sdtrkd.; making up 3-in. drill pipe; 7-in. csg. 6,044 ft.; T.D. 6,874 ft.; 5-in. csg. 6,874 ft.

Markham—Matagorda County

Turman Oil Co. et al No. 3 Hudson, H. Parker Sur. R.U.

Palacios—Matagorda County

Atlantic-McCarthy No. 3 Foley Ld. Co., L. Goodwin Sur. Drk.
Atlantic-McCarthy No. 2 Palacios State Bank, L. Goodwin Sur. Loc.
Glenn McCarthy No. 2 Foley, L. Goodwin Sur. Sd. 7,849-92 ft.; 7-in. csg. 7,892 ft.; perf. 7,850-68 ft.; flwd. dist.; killed to W.O.; reperf. 7,849-61 ft.; flwd. through D.S.; installing preventer.
Glenn McCarthy No. 1 W. M. Rohis, sec. 10, L. Goodwin Sur. T.D. 8,843 ft.; D.S. stuck; perf. csg. 7,862-80 ft.; well blew out; D.S. stuck; fsg.
Glenn McCarthy No. 1 Palacios State Bank, L. Goodwin Sur. T.D. 7,935 ft.; 7-in. csg. 7,391 ft.; I.P. 85 bbls. dist.; 24 hrs.
Sun Oil Co. No. 1 Bay Shore Farms, Lewis Goodwin Sur. T.D. 8,843 ft.; D.S. stuck.

Orange—Orange County

Texas Co. No. 12 Kuhn, T. J. Nolgrass Sur. Drlg. sh.&sd. 6,670 ft.

Segno—Polk County

J. K. Dorrance No. 3 Wing, I.&G.N. Sur. No. 15. Old T.D. 5,447 ft.; P.B. sdtrkd.; drld. to 5,278 ft.; 7-in. csg. on bttm.; perf. 5,245-50 ft.; I.P. 721 B.P.D.; ¼-in. ck.
Gulf Oil Corp. No. 1-B Quinn. T.D. 5,195 ft.; 5-in. csg. 5,189 ft.; tstg.
La Quinta Oil Co. No. 7 Wing, I.&G.N. Sur. No. 15. T.D. 5,248 ft.; run csg.
Gulf Oil Corp. No. 8 Wing, sec. 14, I.&G. N. Sur. Drlg. sdy. sh. 5,316 ft.

Spurger—Tyler County

Republic-Houston Oil Co. No. 4 Hurd, N. Hurd Sur. T.D. 7,658 ft.; 7-in. csg. 7,635 ft.; tstd. S.W.; pulled screen; core ahead.
Republic-Houston Oil Co. No. 5 Hurd fee, N. Hurd Lge. Drk.

McFaddan—Victoria County

Transwestern Oil Co. No. 4, McFaddin Sur. S.D. 4,412 ft.

Placedo—Victoria County

H. B. Ownby No. 5 Malek, S.A.&M.G. Sur. No. 7. T.D. 750 ft.; W.O.C.
H. B. Ownby No. 3 T. P. Traylor, S.A.& M.G. Sur. No. 7. T.D. 4,769 ft.; R.U. to pmp.
T. N. Dev. Co. No. 1-A Henderson & Pickering, Wm. Rupley Sur. T.D. 4,771 ft.; jetting 20 bbls. in 12 hrs.; ⅛-in. ck.

Clay Creek—Washington County

Sun Oil Co. No. 7 Droeger, J. F. Perry Sur. Drlg. sh. 2,097 ft.

Five Corners—Wharton County

Texas Co. No. 8-B Pierce, J. Hyland Sur. T.D. 5,561 ft.; 7-in. csg. 5,555 ft.; I.P. 204 B.P.D.; 40% S.W.
Texas Co. No. 9-B Pierce, J. Caldwell Sur. R.U.

Magnet—Wharton County

Atlantic Ref. Co. No. 3-B Cockburn, Smith & McKenzie Sur. Cmtd. 10¾-in. csg. T.D. 5,542 ft.; 7-in. csg. on bttm.
Humble O. & R. Co. No. 1 Cockburn, S. Castleman Sur. 10¾-in. csg.: 1,236 ft.; T.D. 5,550 ft.; 7-in. csg. 5,540 ft.; started making S.W.; reperf. csg. 5,525-30 ft.; tstg.
Peyton Bros. No. 1 Gish, Lot 2, Blk. 84, M.L.T. Co. Subd., Smith & McKenzie Sur. 10¾-in. csg. 1,112 ft.; core sdy. sh. 5,505 ft.
Texas Crusader Oil Co. No. 2 H. C. Cockburn, Smith & McKenzie Sur. Loc.

Pickett Ridge—Wharton County

Texas Co. No. 33-A Pierce Est., G.B.&N. Sur. No. 4; 9,000-ft. test. T.D. 8,408 ft.; P.B. and sdtrkd. 7,458-92 ft.; T.D. 8,408 ft.; P.B. and sdtrkd. 8,353 ft.; drlg. sh. 8,414 ft.

Withers—Wharton County

Texas Co. No. 31-C Pierce, Wm. Pettus Sur. T.D. 5,557 ft.; 7-in. csg. 5,552 ft. cutting lnr.
Texas Co. No. 36-C Pierce Est., Wm. Pettus Sur. Drlg. sh.&L. 3,592 ft.
Texas Co. No. 38-C Pierce, J. Caldwell Sur. R.U.
Texas Co. No. 1 A. C. Thompson, Blk. 3, Wm. Peters Sur. T.D. 5,548 ft.; 7-in. csg. 5,542 ft.

GULF COAST WILDCATS

Brazoria County

Jack Frazier et al No. 1 Temple Lbr. Co., H.T.&B. Sur. No. 35. Drlg. sh. 3,432 ft.
Humble O. & R. Co. No. 1 W. B. Munson, S. Carter Sur. R.U.
Ohio Oil Co. No. 1 Kempner Adams, H. T.&B. Sur. No. 33. S.D. 7,503 ft.
Pure Oil Co. No. 1 F. M. Slade S. Austin Lge. T.D. 8,397 ft.; hole heaved to 8,120 ft.; fsg.
Texas Gulf Prod. Co. No. 1 W. D. Adams, H.T.&B. Sur. No. 40. Drlg. sh.&L. 7,049 ft.
Texas Co. No. 2 Robbins, James W. Brougham Sur. Drlg. sh. 7,515 ft.

Chambers County

Merit Oil Co. No. 1 T. and M. Wright, C. Smith Sur. R.U.

Fort Bend County

Research, Inc., No. 1 Moore, S. Kennedy Sur. S.D. 5,033 ft.

Galveston County

Maco Stewart No. 1 fee, Chas. Spillman Sur. Cmtd. 16-in. csg. 72 ft.; drlg. sh. 4,710 ft.

Hardin County

Coronado Oil Co. No. 1 Ryan, J. G. Bell Sur. R.U.
Humble O. & R. Co. No. 1 Shone, S. R. Fisher Sur. Drk.

Harris County

Superior Oil Co. No. 1 Butler, Eehrhardt Sur. T.D. 10,574 ft.; P.B. 6,380 ft.; to tst.
West Prod. Co. No. 1 Ammon Underwood, Nicklos Clopper Sur. T.D. 8,350 ft.; pulling D.S.

Liberty County

O. C. Garvey No. 1 A. C. Weaver, T. Devers Sur. 10¾-in. csg. 440 ft.
Humble O. & R. Co. No. 2 Sabine Tram, Malinda Whittington Sur. (Devers area). R.U.
J. G. Mayo et al No. 1 Gibbs Bros. Lbr. Co., J. D. Martinez Sur. Drlg. sh. 5,715 ft.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarty Sur. Drlg. sh. 7,390 ft.

Newton County

Houston Oil Co.-Republic Prod. Co. No. 1 Peavy-Moore, sec. 42, H.&T.C. Sur. Drlg. sh.&L. 1,536 ft.

Tyler County

McArthur & Nixon No. 1 Kountze, J. A. Hankins Sur. S.D. 3,851 ft.

Victoria County

Stanolind O. & G. Co. No. 1 Henderson & Pickering, E. Benavides Sur. R.U.

Washington County

K. D. Harrison and C. E. Starr No. 1 Charles and Wm. Ellerman, Wm. Bridges Lge. 13-in. csg. 290 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 2 Kate Edwards, 330 ft. S line, Lot 85, 660 ft. SW No. 1 Wm. Lewis Sur. T.D. 9,785 ft.; fsg.

Bastrop County

Conservative Oil Co. No. 1 Wentland, F. Wilkerson Sur. Drlg. 2,313 ft.
Marts & Beavens No. 1 Gilliam, Thos. Garretson Sur. T.D. 2,430 ft.; rmg.
Hantho-Nelson, Inc., No. 1 Litton, 71-ac. tr., Cedar Ck. Community. T.D. 2,112 ft.; flwd. oil and bridged; cleaned hole; recompleting.
Hantho-Nelson No. 2 Litton, 660 ft. W of No. 1, 75-ac. tr., Cedar Ck. Community. M.I.M.
R. Olson No. 1 Murchison, A. Litton Sur. Set csg. 1,828 ft.; T.D. 1,847 ft.; drlg. plugs.
Texas Northern Oil Co. No. 1 Barton, J. Rogers Sur. Drlg. 2,911 ft.

Bexar County

Dewey et al No. 1 Weber, 50-ac. tr., Juan Montez Sur. D.&A. 20 ft.
Edna May Oil Co. No. 1 Cassin, F. Rodriguez Sur. Set 7-in. csg. 1,138 ft.; T.D. 1,372 ft.; retstg.

Brooks County

Mills Bennett Prod. Co. No. 1 Jones, 466 ft. N and E lines, Blk. 34, Sanchez Sur., La Rucia Gr. Drlg. 5,611 ft.
Standard of Tex. No. 1 Mestina, Mestina Lse No. 3. T.D. 6,786 ft.; perf. 1,911-31 ft.; comp.; gasser; 1,000,000 ft.
Standard Oil Co. of Texas No. 2 Mestina, Lse. No. 2. R.U.

Caldwell County

Fred Adams No. 1 Shinn, A. Tinney Sur. Cor. T.D. 2,722 ft.; D.&A.
Chisum et al No. 1 Lane, 91-ac. tr., Lockhart Sur. Set csg. 45 ft.; S.D.
Lanning & Coffield No. 1 Withers, Guad. College Sur. T.D. 2,253 ft.; Edw. S.O.; set csg. 2,248 ft.; comp.; 91 bbls. oil, 223 bbls. wtr.
Lanning & Coffield No. 1 Trammell, 150 ft. N line, 750 ft. E line lse., Guadalupe College Sur. S.D. 76 ft.
McNeill Pet. Co. No. 1 Martindale, H. McNeill Sur. R.U.
L. H. Wilson No. 1 Wright, J. Roberts Sur. S.D. 1,667 ft.

Comal County

J. R. Yates No. 1 Heidrich, Heidrich ranch. Drlg. L. 216 ft.

Dimmitt County

Teas & Maryland Corp. No. 1 McKnight, Blk. 13, sec. 23. Spd.
H. F. Wilcox No. 2 Light ranch, 330 ft. S and W lines, sec. 29, I.&G.N.R.R. Sur., Blk. A. Drlg. sh. 5,245 ft.
H. F. Wilcox No. 3 Light ranch, 330 ft. N and W lines, sec. 113, I.&G.N.R.R. Sur., Blk. A. Drlg. 1,012 ft.

Duval County

Baltimore Drlg. Co. No. 1 Afflerbach, Sur. 342. Set csg. 1,180 ft.; sd.; S.O.; prep. test.
V. L. Blanchard No. 1 Benavides, Blk. 59, Sur. 238. D.S.T. 5,395-5,411 ft.; 18½-min. rec. 500 ft. oil, 220 ft. S.W.; W.P. 25 lbs.; cg. ahead 5,411 ft.
Hougen, Tr., No. 1 Patton, Sur. 148. S.D. 3,004 ft.
Humble O. & R. Co. No. 1 Davidson, 648-ac. tr., sec. 218. T.D. 3,050 ft.; P.B. to comp. as wtr. well; D.&A.
Liberty Oil Co. No. 1 State, Sur. 216. T.D. 1,555 ft.; S.D.
Magnolia Pet. Co. No. 1 D.C.R.C., Sur. 259. Drlg. 1,213 ft.
Penn-Palangana Oil Co. No. 2 Schallert, Sur. 239. Drlg. 2,813 ft.
H. J. Porter No. 1 Sevier, Palo Blanquito Gr. Drlg. 217 ft.
Standard Oil Co. of Texas No. 4 Gruy, 330 ft. S and E lines, sec. 28, M. Gussett Sur. R.U.
Texas Canadian Oil Co. and Nelson No. 1 Luby Est., 330 ft. N line, 660 ft. W line, Blk. 10, Nelson Subd. D.&A. 5,510 ft.
E. R. Thomas Est. No. 1 Pena, J. A. Garcia Sur. No. 8. M.I.R.
Tide Water Associated Oil Co. No. 2 Foster, Sur. 200. Sd. 2,467-73 ft.; odor oil; slight color; S.D.; T.D. 3,030 ft.
Tsesmalis & Shipman No. 2 Canales, C SE¼, Lot 75. Set surf. csg.; S.D.
Woodley Pet. Co. No. 1 Parr, 100-ac. tr., San Andres Gr. Sd. 4,795-4,810 ft.; rocked in with 250 lbs. on tbg.; flwd. 6 B.P.H. P.L.O.; 15/64-in. ck.; C.P. 945 lbs.; T.P. 125 lbs.

Edwards County

Dan Auld No. 1 Henderson, sec. 46, Blk. "E." M.I.M.
Amon G. Carter No. 1 Sweeten, SE¼, Blk. 2, Sur. 49. Drlg. 4,076 ft.

Frio County

Amerada Pet. Corp. No. 1 Harrigan, Flores Sur. 306. Lost hole; T.D. 6,410 ft.; P.B. 5,720 ft.; D.S.T. 5,433-5,720 ft.; good blow 3 hrs.; treated with 3,000 gal. acd.; flwd. 25 min. and died; S.I. bldg. up pressure.

Goliad County

Goliad Oil Co. No. 2 Cole, lot 33, Goliad Town. Tr. Sur. Set protective csg. 4,500 ft.; S.D. 5,687 ft.; W.O.O.

Guadalupe County

Mason Altgelt No. 1 Schubert, Esnaurizar Sur. Top chalk 763 ft.; drlg. to L. 991 ft.
Eddy et al No. 1 Smith, Hunter Sur. Drlg. Edw. 2,632 ft.
Felmont Oil Corp. No. 1 Anderson, 40-ac. tr., G. DeWitt Sur. D.&A.; T.D. Edw. 2,452 ft.
Moon O. & G. Co. No. 1 Penshorn, Vincente Duran Sur. S.D. 704 ft.

Hidalgo County

Dayle Smith No. 1 Fairbanks & Young, Blk. 44, Porc. 47. D.&A. 2,286 ft.
Sulgrade Oil Co. No. 1 Mayer & Weill, Porc. 47. Drlg. sh. 3,752 ft.
Y. & B. Oil Co. No. 1 Waite, Tr. 382, Los Jidos Gr. Drlg. sh. 2,143 ft.

Jim Hogg County

Henry M. Brown No. 1 Gutierrez, sec. 22, Sh. 4, El Peyote Gr. Drlg. 357 ft.
M. J. Coffey No. 1 Vela, Sh. 4, Givens Subd., El Peyote Gr. Drlg. 1,316 ft.
French Oil Corp. No. 1 Vela, Sur. 573. Drlg. 2,827 ft.

Jim Wells County

Magnolia Pet. Co. No. 7 Seeligson, 10,432 ac. tr., Los Jaboncillos Gr. Sd. S.G. 6,488-6,503 ft.; D.S.T. 6,488-6,503 ft.; rec. 60 ft. dist.; 1,000 lbs. W.P. 10-min.; took short core; well blew out and burned; S.I. and killed; M.I.R.

Karnes County

DeGraff & Reele No. 1 Cochran, McConnel Lge. Drlg. 1,474 ft.
Ivan Howard No. 1 Moczygemba, Erasmo Seguin 5, League Gr. R.U.

Kendall County

Landon & Peffley No. 1 Seidensticker, Sur. 257, Chorcon Gr. Drlg. 407 ft.

Lee County

Jas. E. Pederson No. 1 Turner, David Hudson Sur. T.D. 6,132 ft.; S.D.

Live Oak County

Chas. Hanna et al No. 1 Wedding, 200-ac tr., Haughy Sur. T.D. 600 ft.; S.D.
C. E. Jacobs et al No. 1 Nichols, S. S. Ryan Sur. 66. T.D. 1,620 ft.; Pettus sd.; D.&A.
W. C. McBride No. 1 Sanger, Sur. 391. D.&A.; T.D. 4,023 ft.
Mills Bennett Prod. Co. No. 1 Nichols, Patrick Henry Sur. Drlg. 916 ft.
Ranco Oil Corp. No. 1 fee, 660 ft. NW and SW lines, Pointevent Sur. 3. M.I.M.

Maverick County

Rio Dev. Co. No. 4 State Bank & Trust Co., Sur. 2. S.D. 457 ft.
Wellington Oil Co. No. 1 Chittam, 330 ft. N line, 2,310 ft. W line, sec. 129, Blk. 7. Drlg. 2,306 ft.

McMullen County

Alabama Minerals Corp. No. 1 Gordon, SW¼, Sur. 127. Drlg. 856 ft.
Howell Oil Corp. No. 1 Martin, Sur. 213. S.D. 3,510 ft.
W. L. Hinds No. 1 Rhodes, NE¼, NW¼ sec. 54. S.D. cor. T.D. 1,600 ft.
E. M. Jones No. 6 Ezzell, NW¼, SE¼, Ragland Sur. 20. S.D. repairs; T.D. 2,491 ft.
Rowan & Nichols No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. T.D. 2,004 ft.; P.B. 1,700 ft.; to sdtrk.; W.O.C.
Schimmel et al No. 2 Hagist, Sur. 467. Cor.: no report.
Pat Tinney No. 1 Rutherford, Blk. 17, Two Rivers Ranch Subd. Drlg. 543 ft.

Medina County

Kelfar Oil Co. No. 1 Briscoe, Schmidt Sur. No. 8. Drlg. 267 ft.

Nueces County

Camp Prod. Co. No. 1-A Wardner, sec. 18. Stratton Subd. Drlg. sh. 3,850 ft.
Southern Minerals Corp. No. 1 River Bros., 80-ac. tr., sec. 301. D.&A. 5,903 ft.
Sam E. Wilson No. 1 Herold, Lot 2, sec. 6. Bohemian Colony Subd., Enrique Villareal Sur. Drlg. sd.&sh. 5,861 ft.

San Patricio County

Danray Oil Co. No. 1 Davis, Tr. 5. Wm. Boyd Sur. T.D. 6,606 ft.; reported sd. 6,530-40 ft.; prep. deepen.
Plymouth Oil Co. No. 1-A Odem, subd. 2 A. Herron Sur. D.S.T. 5,975-86 ft.; 15 min.; rec. 100 ft. oily mud, 75% oil; good blow gas; cg. 6,613 ft.
F. P. Schwab No. 1 Smith, Lot A-16, Cubage & Miller Subd., O'Connor ranch. R.U.
Wellington Oil Co. No. 1-B Welder, SE¼ sec. 6. Cubage & Miller Subd., Garza Sur. D.&A. 7,090 ft.

Starr County

Calderoni-James-Follette No. 1 Rodriguez Blk. 6, Sh. 56. Porc. 80. Set 4½-in. csg. 1,483 ft.; T.D. 1,511 ft.; W.O.C.
Gilcrease Oil Co. No. 3 Castillo, Walker Subd., Porc. 77. D.&A. 822 ft.
E. J. Pearl No. 1 de la Garza, Sur. 262. R.U.
Transwestern Oil Co. and Davenport No. 3 Slick, sec. 527. T.D. S.W. sd. 5,374 ft.; stdg. S.I.; C.P. 2,500 lbs.

Webb County

R. S. Bolling No. 1 Fort Worth Natl. Bank, Sur. 466. M.I.M.
Eugene Garner No. 3 Saldivar, 150 ft. S and E lines, Blk. 12, Sur. 657. Drlg. 531 ft.
French Oil Corp. No. 3 Garcia, N½, Sur. 1121. Drlg. 275 ft.
O. W. Killam No. 2 Bruni, Blk. 83, Borrego Gr., El Ranchito Tr. Tstg. sd. 1,500 ft.
E. J. Pearl No. 1 de la Garza, Sur. 262. Cg. 2,106 ft.
Simon, Grossman & Katz No. 1 Saldivar, 600 ft. W line, 760 ft. N line, Blk. 11, Garner Subd., Murrell Ranch Sur. 657. D.&A. 1,080 ft.
J. W. Magee No. 1 Garcia, Blk. 21, James Subd. Drlg. 1,657 ft.
Paul Meaders No. 1 Garcia, Sur. 338. Loc.

Willacy County

Ruez-Morton, Inc., No. 1 F. Armendiaz, C Lot 9, Sh. 4, San Juan de Carricitos Gr. Drlg. 537 ft.
Ruez-Morton, Inc., No. 1 Johnson-Stillman, Lot 14, Blk. 25, Sh. 44, San Juan de Carricitos Gr. S.D. 643 ft.

Wilson County

Pat Higgins No. 1 Dickey, Rodriguez Sur. Drlg. 1,075 ft.
R. C. Stanley No. 2 Heirholzer, R. Salinas Sur. Oil sd. 1,025-30 ft.; rng. squeeze job 1,031 ft.

Zapata County

H. Fansler No. 2 Gopher Trust Est., Blk. 12, Sh. 8, Sur. 6, Borrego Gr. Drlg. 698 ft.
Rev L. Martin No. 1 Vela, Blk. 44, Sh. 2, El Grullo Gr. D.&A. 1,501 ft.
Eugene Mays No. 1 Flores, Blk. 198, Doty Subd., Charco Redondo Gr. Drlg. 731 ft.
United Prod. Co. No. 4 Jennings, San Antonio de Mira Flores Gr. Cg. sh. 850 ft.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 5-C McCampbell, Lot 12, Blk. 39. Drlg. sdy. sh. 4,520 ft.
Atlantic Ref. Co. No. 6-C McCampbell, Lot 3, Blk. 42. T.D. 7,130 ft.; set csg. 7,130 ft.; comp.; no gauge.
Atlantic Ref. Co. No. 2-A Murray, Sd. 7,089-99 ft.; set 7-in. csg. at T.D. 7,120 ft.; comp.; no gauge.
Atlantic Ref. Co. No. 2-B Murray, Lot 13, Blk. 12. Oil sd. 7,099-7,107 ft.; set csg. 7,110 ft.; comp.; 70 B.P.D. on 9/64-in. ck.; perf. 7,103-07 ft.
Atlantic Ref. Co. No. 3-B Murray, Lot 12, Blk. 12. Drlg. 1,056 ft.
Atlantic Ref. Co. No. 1-C Murray, Lot 6, Blk. 38. Sd. 7,091-7,101 ft. and 7,111-18 ft.; set csg. 7,138 ft.
Atlantic Ref. Co. No. 1-C Porterfield, Lot 8, Blk. 10. Drlg. 6,213 ft.
Atlantic Ref. Co. No. 2 Scrivener, Lot 9, Blk. 11. Sd. 7,100-09 ft.; set csg. at T.D. 7,118 ft.; comp.; no gauge.
Buckingham Oil Co. No. 5-A McCampbell, Lot 4, Blk. 39. T.D. 7,153 ft.; sd. 6,544-48 ft.; P.B. to comp. in upper sd.
Buckingham Oil Co. No. 12-A McCampbell, Blk. 42. Drlg. plugs to perf.; sd. 7,091-7,144 ft.; set csg. 7,144 ft.

Buckingham Oil Co. No. 1-B McCampbell, Lots 13 and 14, Blk. 40. O.W.W.O.; old T.D. 6,557 ft.; tsg.
Buckingham Oil Co. No. 1-C McCampbell, 33.8-ac. tr., Blk. 27. T.D. 7,150 ft.; prep. rework.
Graham & Buckingham Oil Co. No. 1-D Porterfield, Lot 11, Blk. 9. R.U.
Landreth Prod. Co. No. 5-A McCampbell, Lot 4, Blk. 39. T.D. 7,131 ft.; set csg. 7,120 ft.; completing.
Neill & Peterson No. 1-A McCampbell, Lot 1, Blk. 43. Set surf. csg. 1,140 ft.; W.O.C.
Peach Tree Oil Co. No. 2 McCampbell. Set surf. csg.; W.O.C. 1,167 ft.
Peach Tree Oil Co. No. 1 Porterfield, Lot 16, Blk. 10. Oil sd. 7,117-23 ft.; set 7-in. csg. 7,125 ft.; comp.; 20 B.P.D. on ⅛-in. ck.
Peach Tree Oil Co. No. 2 Porterfield, Lots 15 and 16, Blk. 10. Set csg. 1,204 ft.; W.O.C.
Rutherford Oil Corp. No. 1 Conn-Brown, Lot 14, Blk. 10. Set csg. at T.D. 7,141 ft.
Rutherford Oil Corp. No. 1 Yarbrough, Lot 2, Blk. 37. Drlg. 6,020 ft.
Shasta Oil Co. No. 3 Davis, Lot 14, Blk. 9. Cg. 6,821 ft.

Bateman—Bastrop County

Ogden & Reed No. 1 Riddle. D.&A.; T.D. 2,224 ft.

North Dale—Bastrop County

Easton & Manning No. 1 Duran, Flint Sur. Comp.; 24 B.P.D. oil; 10 B.P.D. wtr.; T.D. 2,303 ft.

Plummer—Bee County

W. C. McBride No. 2 Schneider, 600 ft. N of No. 2, Sur. 3. Sd. 3,030-69 ft.; recmtd. csg.; W.O.C.

West Tuleta—Bee County

Blanco Oil Co. and Buchanan No. 3-B Perez, SE¼, sec. 9, Ragley Subd., Uranga Gr. Spd.
Salt Dome Oil Co. No. 3 Tuleta Merchantile Co., SW¼, sec. 10, Wragley Subd., Uranga Gr. Jetting; T.D. 3,079 ft.

Alta Mesa—Brooks County

Standard of Texas No. 5 Mestina Lease No. 1. 7-in. csg. set 3,220 ft.; T.D. 5,505 ft.; perf. 4,513-20 ft.; flwd. 280 B.P.D. on ¼-in. ck.; reworking for completion.
Standard Oil Co. of Texas No. 3 Garcia, Lse. 3. Set csg. 2,529 ft.; T.D. 2,555 ft.; squeeze job.
Standard Oil Co. of Texas No. 8 Mestina, Lse. No. 1. T.A. 3,000 ft.

Alta Verde—Brooks County

Bishop & Woods No. 1 Maupin, Sur. 311. T.D. 1,007 ft.; no show; prep. core ahead.
Dick Young No. 5 Singer, Blk. 12, Sur. 312 (W.O.). T.D. 1,447 ft.; S.D.; W.O.O.
Star Dev. Co. No. 1 Singer, Blk. 8, Sur. 436. O.W.W.O.; old T.D. 948 ft.; perf. 801-18 ft.; set 5½-in. csg. 856 ft.; tstd. gas; W.O.O.

Branyon—Caldwell County

Adams et al No. 6-B Ellison, Jarman Sur. Drlg. clk. 2,089 ft.
Adams & Richards No. 2 Flowers, D. Cooper Sur. Comp.; 100 B.P.D.; T.D. 2,128 ft.
Adams & Richards No. 3 Flowers, Cooper Sur. Drlg. plugs 1,968 ft.
Fred J. Adams No. 5-B Ellison, Cooper Sur. Set csg. 1,955 ft.; comp. 110 B.P.D.; T.D. 2,136 ft.
Artz & Horner No. 4 Brown, J. R. Miller Sur. Comp.; 200 B.P.D.; T.D. 2,201 ft.
Baker & Freeman No. 2 Corder, Neill Sur. Comp.; 250 B.P.D.; T.D. 2,130 ft.
Baker & Freeman No. 3 Corder, J. A. Neil Sur. T.D. 2,176 ft.; T.C. 1,975 ft.; comp.; 80 B.P.D.
Blundell Oil Co. No. 1 Blundell, 102.2-ac. tr., Jarman Sur. Drlg. 1,016 ft.
Cargill et al No. 1 Patton, J. R. Miller Sur. Drlg. 1,917 ft.
Four Link Oil Co. No. 4 Magee, J. A. Neill Sur. D.&A.; T.D. 2,060 ft.
Hantho-Nelson, Inc., et al No. 1 Browne, J. R. Miller Sur. T. chalk 1,875 ft.; T.D. 2,075 ft.; set csg. 1,875 ft.; comp.; 400 B.P.D.
Judge Bros. Co. No. 1 Medlock, Neill Sur. Drlg. plugs; T.D. 2,246 ft.
Lincoln Pet. Co. No. 8 Branyon, J. R. Miller Sur. Drlg. 67 ft.
Lincoln Pet. Co. No. 7 Calliham, Cooper Sur. Comp.; 157 B.P.D.; T.D. 2,123 ft.
Martell Pet. Co. No 2. Clark, J. R. Miller Sur. Drlg. 1,815 ft.
Martell Pet. Co. No. 1 Young, J. R. Miller Sur. T.D. 2,342 ft.; pmpg. oil and sulf. wtr.
Memphis Nat. Gas Co. No. 4 Young, J. R. Miller Sur. Set csg. 2,087 ft.; comp.; est. 100 B.P.D.; T.D. 2,236 ft.
Memphis Nat. Gas Co. No. 5 Young, Miller Sur. D.&A.; T.D. 2,275 ft.
Sherman Nelson No. 3 Branyon, Miller Sur. Comp.; 40 B.P.D.; T.C. 1,878 ft.; T.D. 2,103 ft.
Sherman Nelson No. 2 Clark, Miller Sur. Comp.; 30 B.P.D.; T.D. 2,181 ft.
Sherman Nelson No. 2 Swearingen & Clark, John Neil Sur. Comp.; 130 B.P.D.; T.D. 2,102 ft.; set 7-in. csg. 1,965 ft.
Taylor Ref. Co., No. 5-B Branyon, Cooper Sur. Drlg. ch. 2,085 ft.
Universal O. & G. Co. No. 2 Calliham, Miller Sur. Drlg. sh. 519 ft.
M. W. Vaughy No. 7 Flowers, Neill Sur. T.A.
Whisenant & Trenchard No. 2-A Magee, Neill Sur. D.&A. 2,399 ft.
R. S. Wyrick No. 3 Magee. Set csg. 2,060 ft.; W.O.C.

Buchanan—Caldwell County

Carter et al No. 2 Brown, Cannon Sur. Drlg. 516 ft.
Edwill Oil Co. No. 3 Brown, Cannon Sur. Cg. 1,807 ft.
Edwill Oil Co. No. 3 McConnell, Spillar Sur. Comp.; 51 B.P.D.; T.D. 2,268 ft.
Edwill Oil Co. No. 4 McConnell, Spillar Sur. Set csg. 1,925 ft.; W.O.C.; T.D. 1,958 ft.
McAlester Fuel Co. No. 1 Miears, Cannon Sur. Rng. tbg.; T.D. 2,232 ft.
Sherman Nelson No. 1 Moore, Cannon Sur. Comp.; 50 B.P.D.; T.D. 2,404 ft.
Potter P. L. Co. No. 1 Medlin, Cannon Sur. Drlg. sh. 226 ft.
L. G. Priest No. 1 Chambless, Goodman Sur. T.D. Edw. 2,645 ft.; S.O.
Taylor Ref. Co. No. 1 Lynch. Tstg. 2,200 ft.

Dunlap—Caldwell County

W. B. Bryant No. 1 Walker Bros., S. Seal Sur. Drlg. Buda 2,368 ft.
R. E. Fair No. 1 Dunlap, Seal Sur. Drlg. sh. 2,167 ft.
Chas. Schreiner No. 1 Moody, Seal Sur. Rng. csg. 2,200 ft.

Luling—Caldwell County

Spokane O. & G. Co. No. 1 Hibbits, J. Henry Sur. Drlg. sh. 432 ft.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 5 Hickman, G. Hinds Sur. Set csg. 2,639 ft.; W.O.C.
Pagenkopf & Jamieson No. 2 Hanson. Hinds Sur. T.D. 2,653 ft.; comp.; 40 B.P.D.

Charamousca—Duval County

N. V. Duncan No. 14 Worden-Draught, Sur. 151. Drlg. 1,400 ft.

Driscoll—Duval County

Continental Oil Co. No. 16-A, Sur. 448. T.D.; sd. 2,807 ft.; set csg.; W.O.C.

Hoffman—Duval County

Bridwell Oil Co. No. 5 Green, Sur. 118. Drlg. 2,128 ft.
Cox & Hamon No. 13 Green, Sur. 118. Comp.; 55 B.P.D.; sd. 2,769-71 ft.
Cox & Hamon No. 19 Green, Sur. 118. Comp.; 45 B.P.D.; sd. 2,731-34 ft.
Cox & Hamon No. 20 Green, Sur. 118. Set csg. 21 ft.; W.O.C.
Cox & Hamon No. 6 Robles, Sur. 68. Set csg. 21 ft.; W.O.C.
Duval Oil Corp. No. 9-A Hoffman, Sur. 118. Drlg. 1,487 ft.

Kohler—Duval County

Bunn Bros. & Coates No. 6-B Peters, Sur. 29. No report.

Labbe—Duval County

Humble O. & R. Co. No. 8 Roos, sec. 119. Swbg. 2,816 ft.
Humble O. & R. Co. No. 9 Roos, sec. 119. Drlg. sd. 2,897 ft.
Magnolia Pet. Co. No. 8 Labbe, Sur. 1. Drlg. plugs 2,862 ft.

Loma Novia—Duval County

Humble O. & R. Co. No. 23-C Welder, Sur. 554. Oil sd. 2,681-90 ft.; comp.; 72 B.P.D.; ⅜-in. ck.

Lundell—Duval County

Govt. Wells Oil Co. No. 6 Lundell, Sur. 140. Drlg. 1,617 ft.

North Sweden—Duval County

Argo Oil Co. No. 6 Carrillo, 79.93-ac. tr., Blk. 9. Sd. 4,758-74 ft.; set csg. 4,761 ft.; W.O.C.
Argo Oil Co. No. 7 Carrillo, Blk. 9. Drlg. 1,285 ft.
Arkansas Fuel Oil Co. No. 4 Rossi, 100-ac. tr., Santos Flores Gr. Cg. 4,613 ft.
Benedum & Trees Oil Co. No. 5 Puig, San Andres Gr. Sd. 4,783-93 ft.; rng. screen and lnr.; 7-in. at 4,783 ft.
Bridwell Oil Co. No. 2 Anciro, 152-ac. tr., Lot 19. Drlg. 2,379 ft.
Frank Gravis Oil Co. No. 3-A Puig, 100-ac. tr., San Andres Gr. Oil sd. 4,752-63 ft.; drlg. ahead 4,803 ft.
Gravis & Doran No. 5 Puig, 200-ac. tr., San Andres Gr. Set csg. 550 ft.; W.O.C.
Hiawatha Oil Co. No. 2 Parr, 330 ft. N and W lines, lse., San Andres Gr. No. 24. Cg. oil sd. 4,712 ft.
Navarro Oil Co. No. 1 Owen, Blk. 19. Oil sd. 4,768-80 ft.; set csg.; W.O.C.
Nordan & Morris No. 1 West, 50-ac. tr., Santos Flores Gr. R.U.
Reynosa Oil Co. No. 3 Wilson, Santos Flores Gr. Drlg. 1,157 ft.
Russ Pet. Co. No. 4 Farias, sec. 9. Sd. 4,812-21 ft.; comp.; 77 B.P.D.; ⅛-in. ck.
Standard Oil Co. of Kansas No. 7 Parr, 80-ac. tr., San Andres Gr. Spd.
Standard Oil Co. of Kansas No. 8 Parr, 80-ac. tr., San Andres Gr. Sd. 4,726-37 ft.; comp.; 9 B.P.H. on ⅛-in. ck.
Standard Oil Co. of Kansas No. 8 Rossi, Santos Flores Gr. No. 25. Sd. 4,781-98 ft.; T.D. 4,798 ft.; set csg.; W.O.C.
Standard Oil Co. of Kansas No. 1 Southland Life, Flores Gr. Top oil sd. 4,751 ft.; set 7-in. at 4,747 ft.; W.O.C.

Palangana—Duval County

Penn Palangana Oil Co. No. 1 C. K. Gravis Sur. 250. Fsg. 6,165 ft.

Sarnosa—Duval County

Sarnosa Oil Corp. No. 17 Weil, 300-ac. tr., Sur. 130. Oil sd. 2,405-13 ft.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 21 D.C.R.C., sec. 100. Sd. 2,006-10 ft.; comp.; 13 B.P.H. on ½-in. ck.

Seven Sisters—Duval County

S. and D. Daube No. 36 Campos, Sur. 224. T.D. 2,734 ft.; W.O. pmp.
Humble O. & R. Co. No. 23 Dowdy, Sur. 272. M.I. rig.
S. & D. Daube No. 37 Campos, Sur. 224. T.D. 2,730½ ft.; W.O. pmp.
Sun Oil Co. No. 2 Rodriguez, sec. 222. Cg. 2,797 ft.

Sweden—Duval County

Hiawatha Oil Co. No. 1 Herberger, Sur. 14, Ball Subd., Agua Poquita Gr. Sidetracking 1,800 ft.; T.D. 5,896 ft.

Thomas-Lockhart—Duval County

Lockhart Bros. No. 2 Parr, Sur. 277. Set csg. 1,721 ft.; W.O.C.

Pearsall—Frio County

Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.) Set 7-in. protective csg. 10,341 ft.; drlg. 10,429 ft.
Amerada Pet. Corp. No. 4 Smith, Mason Sur. 322. Drlg. 2,028 ft.

Darst Creek Extn.—Guadalupe County

Kenedy & Crowley No. 1 Anderson, J. R. Robinson Sur. Drlg. sh. 2,213 ft.
Magnolia Pet. Co. No. 6 Knodel, Darst Sur. Set csg. 2,581 ft.; W.O.C.
Riddle Oil Co. No. 2 Williams, DeWitt Sur. No. 13. Drlg. sh. 1,875 ft.
Texas Co. No. 8 Anderson, J. R. Robinson Sur. Drlg. 2,351 ft.

Luling—Guadalupe-Caldwell Counties

Koening Oil Co. No. 12 Tiller, J. Henry Sur. Comp.; 150 B.P.D.; T.D. 2,100 ft.
Millican & Norman No. 4 Tolbert, J. Henry Sur. Comp.; 37 B.P.D.; T.D. and top Edw. 2,103 ft.
Rio Bravo Oil Co. No. 16 Merriweather, J. Henry Sur. Drlg. sh. 1,689 ft.
Taylor Ref. Co. No. 1 Harris, Cottle Sur. T.D. Edw. 2,090 ft.; R.U. to pmp.

Manford—Guadalupe County

Atlantic Oil Inv. Corp. and Blackmar No. 1 Huff, Hodes Sur. T.D. 2,504 ft.; P.B. D.; 2,404 ft.; R.U. to pmp.

Zoboroski—Guadalupe County

Forest Dev. Corp. No. 3 Hoffman, DeWitt Sur. R.U. to pmp.; T.D. 2,544 ft.
Forest Dev. Corp. No. 4 Hoffman, DeWitt Sur. Set csg. 2,339 ft.; W.O.C.
Forest Dev. Corp. No. 6 Hoffman, DeWitt Sur. Set csg. 2,284 ft.; T.D. 2,288 ft.; W.O.C.
Forest Dev. Corp. No. 1 Krueger, Branch Sur. Washing down; T.D. 2,250 ft.
Skivereen Oil Co. No. 1 State of Texas, Guad. River bed, 50 ft. S of No. 1. Tstg.; T.D. 2,240 ft.

LaBlanca—Hidalgo County

Atlantic Ref. Co. No. 1 Lewis, Blk. 214. Comp.; 120 B.P.D.; dist.; ¼-in. ck.; T.P. 2,750 lbs.; C.P. 2,150 lbs.; perf. 7,882-87 ft.; T.D. 8,546 ft.
Dee, Davenport No. 1 Swallow, Blk. 215. T.D. 7,564 ft.; D.&A.

Samfordyce—Hidalgo and Starr Counties

Kingwood Oil Co. and E. A. Graham No. 2 Yturria, 300 ft. E of No. 1, Porc. 100. R.U.
H. J. Porter No. 1 Flores, Tr. 250, Porc. 38. M.I.M.

Sandia—Jim Wells County

Roy Gaines No. 1 Wade, Blk. "C," Bode Subd., Wade ranch. D.&A. 5,149 ft.
L. L. Smith et al No. 1 Allen, Wade ranch. R.U. and abd.

West Premont—Jim Wells County

Howard Presnall No. 1 Holmes, Lots 59 and 70, Blk. 76. Spd.

North Pettus—Karnes County

Magnolia Pet. Co. No. 17 Porter, B.&B. Sur. 23. Completing; T.D. 3,708 ft.

South Burnell—Karnes County

Dirks Bros. No. 2 Ruhman, 177-ac. tr., Ballard Sur. T.D. oil sd. 3,620 ft.; set 5½-in. csg. 3,590 ft.; comp.; no gauge.
Luling O. & G. Co. No. 3 Boyce, Porter Sur. Drlg. 2,028 ft.
Pettus Oil Ref. Co. No. 2 McKinney, 589-ac. tr., Ballard Sur. R.U.

Kingsville—Kleberg County

Harry Edwards No. 1 Noack, Lot 4, Blk. 50, Subd. of town of Uriah. T.D. 3,535 ft.; S.D.

Ezzell—McMullen County

E. M. Jones No. 8 Ezzell, Russell Sur. T.D. 1,573 ft.; perf. 1,543-53 ft.; completing.
Edwin M. Jones No. 10 Ezzell, H. Russell Sur. T.D. 1,533 ft.; completing; oil sd. 1,517-27 ft.
Edwin M. Jones No. 11 Ezzell, sec. 20, H. Russell Sur. T.D. sd. 1,535 ft.; comptg.
Edwin M. Jones No. 12 Ezzell, sec. 23, H. Russell Sur. Set csg. 1,530 ft.; W.O.C.

Loma Alta—McMullen County

J. T. Lanier No. 1 Hagist, SE¼, N½, Sur. 481. Drlg. 2,497 ft.

Agua Dulce—Nueces County

Conroe Drlg. Co. No. 1 Hagan & Stewart, sec. 206, Bishop Subd. T.D. sd. 6,814 ft.; perf. 6,456 ft.; tstd. dist.; shot; D.S. 6,402-18 ft.; comp.; 36 B.P.D. dist.; ¼-in. ck.
Texon Drlg. Co. No. 2 Elliff, 3,054-ac. tr., Longorio Sur. Drlg. 4,337 ft.
United Prod. Co. No. 1 Harvey, 1,100 ft. W line, 1,050 ft. N line, tr. M. Garza Sur. Set 5½-in. csg. 7,457 ft.; cig. on ⅛-in. ck.; T.P. 1,500 lbs.; C.P. 1,800 lbs.
United Prod. Co. No. 3-A Rivers, sec. 9, Peters Subd. Cg. sh. 8,412 ft.
United Prod. Co. No. 1 Schroeder, sec. 87, Paul Subd., Driscoll ranch. Drlg. sh. 6,441 ft.

Clara Driscoll—Nueces County

O. W. Killam No. 3 Ellick, 86 ac. tr., Sur. 109. Drlg. 557 ft.
Mid-Continent Pet. Corp. No. 3 Sevier, R. Russel Sur. Drlg. 3,089 ft.

Flour Bluff—Nueces County

Humble O. & R. Co. et al No. 1 Brett, Lot 1, Blk. 48. R.U.
Humble O. & R. Co. et al No. 1 Chapman, Lot 5, Blk. 41. T.D. 6,664 ft.; comp.; 100 B.P.D. on ⅛-in. ck.
Humble O. & R. Co. et al No. 1 Graham, Lot 15, sec. 41. Drlg. sh. 5,885 ft.
Humble O. & R. Co. et al No. 6-B Miller, sec. 48. T.D. 6,665 ft.; flwg. in pits.
Humble O. & R. Co. No. 3-A Ritter, Lot 23, Blk. 55. Drlg. sh. 6,440 ft.
Humble O. & R. Co. et al No. 3 Robardeau, Lot 6, Blk. 49. T.D. 6,656 ft.; flwg. in pits.
Humble O. & R. Co. et al No. 2-B Thompson, Lot 8, Blk. 55. R.U.
Humble O. & R. Co. et al No. 1 Turcott, Lot 12, Blk. 56. T.D. sd. 6,659 ft.; set csg.; flwg. in pits.

London—Nueces County

Wellington Oil Co. and Seaboard Oil Corp. No. 1-B Lehman, NW¼, SE¼, sec. 25. Cg. 4,923 ft.; (cor.).

Luby—Nueces County

Seaboard Oil Corp. No. 2 Luby, Blk. 4, Sh. 2. Drlg. hd. sd. 3,913 ft.
Seaboard Oil Corp. No. 1 Schaeffer, Blk. 3, Sh. 2, Luby Subd. D.S.T. 7,004-15 ft.; rec. 1,300 ft. fluid 50% oil, 50% S.W.; rmg.
Stanolind O. & G. Co. No. 1 McCann, 565.3-ac. tr. T.D. L. 6,627 ft.; sd. 5,033-53 ft.; comp.; 167 B.P.D.

Saxet Heights—Nueces County

Baltic Drlg. Co. No. 1 Bowen, Lot 8, Community Club Pl. Drlg. sdy. sh. 4,067 ft.
Wm. Brady No. 2 Whalen, Villareal Sur. R.U.
W. H. Harrison No. 3 McConnell, Blk. 5, Oak Park Addn. Set surf. csg. 307 ft.; stdg.
Taylor Pet. Co. No. 4 Dunn, Rincon del Oso Sur. Sd. 4,027-44 ft., T.D.; S.W. sd. 4,060 ft.; perf. 4,040-44 ft.; comp.; 96 B.P.D.
Sam E. Wilson, Jr., No. 1 Moody, C Lot 14, Ellendale Gardens No. 2. Oil sd. 4,070-84 ft.; set 5½-in. csg. 4,090 ft.; drlg. plug. 4,100 ft.

Saxet—Nueces County

C. Andrade No. 8 Frank, 48-ac. tr., Sur. 500. Sd. 6,905-35 ft.; drlg. plug.
R. B. Bryant No. 1 Frank, 50-ac. tr., Sur. 500. M.I.M.
R. B. Bryant No. 8 Frank, 40-ac. tr., Sur. 500. Sd. 6,919-51 ft.; perf. csg. 6,932-36 ft.; comp.; 100 B.P.D. on ⅛-in. ck.
Bryant & Howell No. 10 Frank, 40-ac. tr., Sur. 500. Drlg. 5,947 ft.
Bentex Oil Co. No. 3 Harmon, Sur. 416. Drlg. 5,197 ft.
Bryant No. 9 Frank, 40-ac. tr., Sur. 500. Drlg. 6,889 ft.
Bryant & Howell No. 4 Kocurek, 25-ac. tr., Smith Sur. 25. Sd. 4,155-74 ft.; comp.; 96 B.P.D.; ¼-in. ck.
Bryant & Howell No. 2-B Plachy, 20-ac. tr., Smith Sur. 25. D.&A. 4,232 ft.
Bryant & Howell No. 3 Plachy, Smith Sur. 25. Comp.; 120 B.P.D.; ⅛-in. ck.; perf. 4,160-74 ft.; T.D. 4,260 ft.
Bryant & Howell No. 4 Plachy, Sur. 25. Sd. 4,155-75 ft.; set csg.; drlg. plugs.
Donico Prod. Co. No. 1 Donigan, 80-ac. tr., sec. 7, Rge. 6. Set csg. 4,900 ft.; comp.; 532 B.P.D. on ⅛-in. ck.; perf. 4,070-77 ft.
Donico Prod. Co. No. 8 Donigan, 80-ac. tr., sec. 7, Rge. 6. Spd.
J. E. Freeman No. 1 Scott, Sur. 500. Drlg. 1,216 ft.
L. Glasscock No. 1-A Johns, McGregor Sur. 582. Sd. 5,299-5,308 ft.; comp.; no gauge; T.D. 5,308 ft.
Tom Graham No. 5 Harmon, 34-ac. tr., Sur. 416. Sd. 6,932-39 ft.; perf. 6,917-25 ft.; tstd. S.W.; comp.; 86 B.P.D.; ⅛-in. ck.
Greta Oil Corp. No. 2 Bliss, 25-ac. tr., Sur. 406. Drlg. 4,173 ft.
Greta Oil Co. No. 6 Humphries, Stevens Sur. Drlg. 976 ft.
Hiawatha Oil Co. No. 13 Hutchins-Stillwell, Blk. 30, Sheppard Farm Lots. Drlg. 5,173 ft.
Houston Oil Co. No. 6 Harrell, Blk. 13, Sheppard Farm Lots. Cg. sd. 4,865 ft.
Houston Oil Co. No. 7-A Harrell, sec. 27, Sheppard Farm Lots. Set csg. 4,400 ft.
Houston Oil Co. No. 3 Isensee, Blk. 11, Sheppard Farm Lots. T.D. 4,868 ft.; jetting in gun barrel.
Kepley Prod. Co. No. 6 Donigan, 100-ac. tr., sec. 7, Rge. 5. Sd. 4,862-76 ft.; set csg. 4,903 ft.; recmtd. perfs. 4,862-66 ft.
Maryland Corp. No. 1 Gallagher, 110.5-ac. tr., Smith Sur. 25. Set csg. 4,252 ft.; perf. 4,120-22 ft.; cleaning.
Maryland Corp. and Renwar Oil Corp. No. 2 Stillwell-Sagarino, Sur. 500. R.U.
Morgan & Chapman Minerals Corp. No. 9 Morgan-Clark, NE¼, Sur. 405. T.D. 6,945 ft.; sdtrkd. 4,622 ft.
Phillips Pet. Co. No. 6 Hutchins, Blk. 29, Sheppard Farm Lots. Set csg. 6,987 ft.; tstd. S.W. at 6,927-35½ ft.; perf. 6,739-42 ft.; comp.; 190 B.P.D.
Phillips Pet. Co. No. 7 Hutchins, 60-ac. tr., Sheppard Farm Lots 29. Drlg. 6,867 ft.
Phillips Pet. Co. No. 7 Morgan, S½, sec. 405. R.U.
Potter & Snowden No. 1 Taggert, Blk. 5, Sur. 401. S.D. 6,004 ft.
Renwar & Maryland No. 1-A Rand Morgan, Sur. 415. O.W.W.O.; old T.D. 5,825 ft.; T.D. 6,701 ft.; sd. 6,685-6,701 ft.; set csg.; perf. 6,695-6,700 ft.; setting 5½-in. csg. inside 7-in. csg. to plug csg. leak; drlg. plug.
Republic Nat. Gas Co. No. 20 Dunn, Blk. 38, Sheppard Farm Lots. Perf. 6,725-40 ft.; 7-in. at 6,977 ft.; comp.; 200 B.P.D. on ⅛-in. ck.

Republic Nat. Gas Co. No. 21 Dunn, Blk. 37, Sheppard Farm Lots. R.U.
Richardson Pet. Co. No. 22 Cain & Secrist, Blk. 23, Russell Farm Lots. Cg. 4,415 ft.
Richardson Pet. Co. No. 6 Perkins-La-Gasse, 20-ac. tr., Sheppard Farm Lot 22. Rmg. 5,766 ft.
Richardson Pet. Co. No. 12 Quiros, Sheppard Farm Lots No. 26. Rmg. 6,762 ft.
Richardson Pet. Co. No. 7 Sedwick, 124-ac. tr., Sur. 311. T.D. 6,945 ft.; perf. csg. 6,760 ft.; squeeze job.
Richardson Pet. Co. No. 11 Sedwick, 184-ac. tr., Dunn Sur. 312. Set surf. csg.; W.O.C.
Ben F. Smith No. 1 Ocker, Villareal Sur. T.D. 4,879 ft.; sh.; rmg.
Southern Minerals Corp. No. 5 Elder, 60-ac. tr., Sur. 311. T.D. 6,741 ft.; set csg.; W.O.C.
Southern Minerals Corp. No. 9 Ocker, 205-ac. tr. R.U.
Texon Drlg. Co. No. 1 Janosek, 32.74-ac. tr., Sur. 25. R.U.
Texon Drlg. Co. No. 6 Scoggin, 50-ac. tr., Sur. 315. Cg. 4,797 ft.
Warner Quinlan Co. of Tex. No. 5 Isensee, Blk. 1, Sheppard Farm Lots. Drlg. 4,322 ft.

Sullivan—Nueces County

Lockhart et al No. 1 O. Puri, Lot 2, sec. 7, Ross Peters Subd. No. 2. Sd. 7,032-52 ft.; P.B. and sdtrkd.; drlg. sdtrkd. hole 6,737 ft.

Midway—San Patricio County

Phillips Pet. Co. No. 3 Ivey, sec. "K," Pauls Subd. Drlg. plug in surf. csg.
Phillips Pet. Co. No. 2 Schmidt, sec. 83. Set csg. 5,389 ft.; perf. 5,338-40 ft.; tstd. S.W.; comp.; 213 B.P.D. on 9/64-in. ck.; perf. 5,338-40 ft.
Phillips Pet. Co. No. 3 Schmidt, sec. 81. R.U.
Sun Oil Co. No. 1 Coggin, sec. 82. Drlg. 5,107 ft.

Plymouth—San Patricio County

Plymouth Oil Co. No. 81-C Welder, sec. 70. T.D. oil sd. 5,484 ft.; set csg.; W.O.C.
Sun Oil Co. No. 3 Roundtree, sec. 34, I. & G. N. Perf. 5,636-37 ft.; pmpg. oil and wash wtr.; no gauge.

Taft Field—San Patricio County

Humble O. & R. Co. No. 26 Mayo, 320-ac. tr., Ottman Sur. Comp.; 13 B.P.H. on ¾-in. ck.; T.D. 3,980 ft.
Humble O. & R. Co. No. 27 Mayo, 320-ac. tr., Ottman Sur. Comp. 15.4 B.P.H. on ¾-in. ck.; T.D. 3,981 ft.
Humble O. & R. Co. No. 29 Mayo, 32-ac. tr., Ottman Sur. R.U.

Barbacoas—Starr County

K. E. Merren No. 1-A S.C.C.C., Blk. 34, Lambeth Subd., Porc. 89. Set csg. at T.D. 5,640 ft.; sd. 5,470-91 ft.; swbg.
H. Mode No. 1 Starr County Cattle Co., Blk. 18, Jefferies Lambeth Subd., Porc. 89. T.D. 2,774 ft.; set csg. 2,516 ft.; W.O.C.

Ricaby—Starr County

Dean Bros. No. 1 Valadez, Porc. 84. Set csg. 87 ft.; W.O.C.
Dodd, Tr., No. 6 Wood Est., Porc. 84. S.D. 720 ft.
Sioux Oil Co. No. 5 Ricaby, M. Martinez Sur., Porc. 83. R.U.
Sun Oil Co. No. 4 Wardner, Porc. 84. Set csg. 1,763 ft.; W.O.C.

Roma—Starr County

Texas Co. No. 6-A Guerra, Sh. 305-D, Porc. 67. T.D. 3,650 ft.; swbd. to 2,500 ft.; flwd. gas with slight spray oil on 16/64-in. ck.; 7-in. at 3,540 ft.; flwg.; no gauge.

Cole—Webb County

Magnolia Pet. Co. No. 3 Valdez, Valdez Sur., Blk. 8. R.U.

Killam—Webb County

C. H. Bailey No. 3 Garcia, Owens Sur. 786. Sd. 2,077-85 ft.; swbg.
O. W. Killam No. 3 Garcia-Villareal, E½, SE¼, Sur. 337. R.U.
Mills Bennett Prod. Co. No. 5 Garcia, 80-ac. tr., Sur. 786. Spdg.

Lopez—Webb-Duval Counties

C. H. Andrus No. 1 Billings, Sur. 10. R.U.

O'Hern—Webb County

Magnolia Pet. Co. No. 31 Benavides, Blk. 26. Comp.; 75 B.P.D.; T.D. 2,880 ft.
Magnolia Pet. Co. No. 32 Benavides, sec. 13, Sur. 174. Drlg. 1,106 ft.
Sun Oil Co. No. 12 Benavides, Blk. 509. Drlg. 2,607 ft.

Oilton—Webb County

Gypsy Oil Co. No. 3 Martin, Sur. 458. Drlg. sh. 1,765 ft.
Gypsy Oil Co. No. 4 Martin, Sur. 458. R.U.
Rowan & Hope No. 1 Laurel Bros., NW¼, Sur. 1006. M.I.R.

LaSal Vieja—Willacy County

Shell Pet. Corp. No. 2 Yturria, Sh. 64, Carricitos Gr. Drlg. 4,927 ft.

Escobas—Zapata County

B. W. Roscoe No. 31 Bustimante, Sh. 33, Fansler Part. Completing; sd. 1,218-20 ft.
B. W. Roscoe No. 32 Bustimante, Sh. 33, Fansler Part. Comp.; 30 B.P.D.; T.D. 1,204 ft.
Texas Co. No. 105 Jennings, Cerrito Blanco Gr. Set 7-in. csg. 1,273 ft.; W.O.C.; T.D. 1,316 ft.; P.B. 1,300 ft.; comp.; 40 B.P.D.
Texas Co. No. 106 Jennings, Cerrito Blanco Gr. R.U.

NORTH TEXAS WILDCATS

Archer County

O. P. Darsey No. 1 J. T. Longley, sec. 183, T.E.&L. Sur. 951-53 ft.; P.O.P.; est. 10 bbls.
Hammon, Hanlon-Buchanan No. 1 W. P. Ferguson, sec. 2, H.&G.N. Sur. Drk.
T. G. McCurdy No. 2 M. F. Martin, H. Grooms Sur. A-155. O.S. 980-91 ft; shot 15 qts.; C.O.

Clay County

Bridwell Oil Co. No. 1 H. Boddy, E. Humphries Sur. A-195. Loc.
W. Gant No. 4 C. M. Worsham, sec. 38, G. P. Meade Sur. 6⅝-in. 3,915 ft.; O.S. 3,923-32 ft.; tstd.; est. 1,000 B.P.D.
T. E. Seigler No. 1 G. W. Scaling, G. F. Bridgeman Sur. A-40. Loc.

Collin County

F. Jones No. 1 Sherley, G. Morrison Sur. S.D.O. 3,003 ft.

Cooke County

Benton & Holmes No. 1 Gibson, J. English Sur. A-345. S.D.O. 3,010 ft.
Denver P. & R. No. 1 J. M. Pearce, S. C. Atkinson Sur. A-10. Pits.
Kiel & Kiel No. 1 Sears, Barnett Sur. L. 1,037-1,090 ft.; tstg. with acid.
L. A. McWhirter, tr., No. 1 W. J. Davidson, Geo. Dooley Sur. A-301. S.D.O. 715 ft.
F. W. Merrick, Inc., No. 1 Redman, J. W. Drummond Sur. Drlg. 1,650 ft.

Denton County

California Ref. Co. No. 1 W. & S. Life Ins. Co., B.B.B.&C. Sur. A-783. S.S.O. 1,461-65 ft; 6⅝-in. 1,460 ft.; W.O.C.; S.D.O.; drk. blown down.
Manning & Moore No. 1 Dora Ratchford, J. Walters Sur. T.D. 2,702 ft.; recmtg. 6⅝-in. 1,910 ft.
Scroggins et al No. 1 S. M. Freeman, Bradshaw Sur. A-104. S.S.O. 1,630-40 ft.; will test.

Foard County

J. B. Baker, Jr., No. 1 J. F. Long, sec. 295, H.&T.C. Sur., Blk. A. Drlg. 1,549 ft.
O. P. Burnham No. 1 Ward, sec. 41, H & T.C. Sur., Blk. 8. T.D. 1,830 ft.; U.R. 6⅝-in. at 1,750 ft.

Grayson County

Denver P. & R. Co. No. 1 Cannon, A. Berry Sur. A-130. Cmtd. 6⅝-in. 2,388 ft.; S.S.O. 2,388-95 ft.; 400 ft. of oil; 50 ft. S.W. in hole.

Montague County

Montague Oil Co. et al No. 1 J. A. Brite sec 2882, T.E.&L. Sur. Set 6-in. 3,927 ft.; S.S.O. 3,927-32 ft.; tstd. S.W.; S.D.O.
J. W. Sorrell et al No. 1 J. E. Waitnall, S. H. Smith Sur. A-662. S.D. 2,000 ft.
Ventex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. Drlg. 3,390 ft.

Wichita County

Golding & Cochran No. 1 Mrs. Grace Jennings, sec. 12, H.T.&B. Sur. S.S.O. 1,584-97 ft.; est. 20 bbls. on test.
W. B. Hamilton No. 1 Mrs. M. Parker, M. Ramsey Sur. A-471. Drlg. 600 ft.
LeBus No. 1 J. F. Miller, W. R. Eaves Sur. A-447. Drlg. 1,785 ft.
W. B. Omohundro No. 1 First Natl. Co., sec. 28, W.V.F.L. Sur. Drk.
W. B. Omohundro No. 1 J. A. Kemp, Blk. 52, W.V.F.L. Sur. Drlg. 3,140 ft.
Patterson et al No. 1 B. C. Ellis, J. Waldschmidt Sur. A-792. Spud.
E. J. Stump No. 1 M. P. Bishop, L. Netherley Sur. A-240. Set surface pipe; W.O.R.

Wilbarger County

Barry & Hayes No. 1 McGill, sec. 3, Blk 9, H.&T.C. Sur. U.R. 10-in.; T.D. 2,120 ft.
W. W. McDonald No. 3 Waggoner A, sec. 26, H.&T.C. Sur. Testing lime 3,638-54 ft. with acid; P.B. and tstg. S.S.O. 3,-117-25 ft.

Wise County

Latex Oil Co. No. 1 C. R. Smith, J. Couch Sur. A-104. Showing gas 3,843-45 ft.; coring ahead.

Young County

H. J. Cox No. 1 W. T. Donnell, J. M. Smith Sur., sec. 1-7-1879. S.D.O. 1,810 ft.
Eppenauer Drlg. Co. No. 1 J. B. Hazelton, J. Harmon Sur. A-1607. Drlg. 3,000 ft.
T. D. Humphrey No. 1 S. R. Ragland, T. B. Kuykendall Sur. 6⅝-in. 3,140 ft.; drlg. 3,200 ft.
Lupton & Long No. 1 W. I. Gilmore, J. Gilmore Sur. A-2135. Drlg. 2,370 ft.; drk. down.
W-K Royalty Co. No. 1 J. A. Wright, J. N. Taylor Sur. A-1,243. Loc. 4,000-ft. test.
H. Zweifel No. 1 R. D. Sewell, M. Case Sur. A-1402. Gas sd. 3,752-4,050 ft.; tested 2,750,000 ft. gas; 5-in. cmtd. 4,333 ft.; S.D.O. 4,490 ft.

E. C. TEXAS WILDCATS

Anderson County

C. & G. Oil Co. No. 1 F. A. Newson, T. C. Lively Sur., 3 mi. NW of Percilla. Top Woodbine 5,981 ft.; crg. 6,000 ft.
Humble O. & R. Co. No. 1 Mrs. S. Hassell, J. Beard Sur., 2 mi. N of Jarvis. Drlg. 4,135 ft.

Bowie County

Chew & Bassett No. 1 Barkman. S.D. 2,-851 ft.
Ferguson & Hill No. 1 Breckenridge. S.D. 2,951 ft.
Woodley & Bentley No. 1 Lumpkin. S.D. 4,843 ft.

Cherokee County

A. C. Bierman et al No. 1 L. J. Strong, 330 ft. from N and E of 181-ac. tract in F. J. Anthony Sur., 1 mi. NW Mixon. Drlg. 3,236 ft.
Merica Oil Co. (W. L. Stone) No. 1 Cherokee Dev. Co., A. J. Acker Sur., 2 mi. E of Maydelle. M.I.M.

Falls County

M. Hays et al No. 1 Mrs. J. J. Hodges, N. K. Robinson Sur., 5 mi. SW of Lott. Coring 1,312 ft.

Fannin County

Stewart Drlg. Co. No. 1 N. Young, S. H. Hitchcock Sur., 1 mi. W of Randolph, W. of Glazier & Trippe No. 1 Young dry hole. Set csg. 100 ft.

Freestone County

Holt et al No. 1 W. H. Chambers, W. D. Allison Sur., 2¾ mi. N of Keechi 5,200-ft. test. El. 426 ft.; drlg. 4,922 ft.
C. E. Rossiter No. 1 J. P. Fulton in J. P. Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.

Gregg County

Humble O. & R. Co. & Gulf O. Corp. No. 1 E. Robertson, M. Mann Sur., 2½ mi. SW of Longview Trinity test. El. 272 ft.; drlg. 990 ft.

Henderson County

American Liberty Oil Co. et al No. 1 LaRue & Johnson, Blk. 11, P. Jackson Sur., 2 mi. W of LaRue. El. 464 ft.; drlg. 1,828 ft.
Wm. McDougall No. 1 Trinity, F. & S. Land Co., Blk. 1, H.&T.C. Sur. Drk.
Tide Water Assoc. et al No. 2-C McElreath & Suggett, W. P. Wyche Sur., Top Glen Rose 6,282 ft.; coring 8,515 ft.

Houston County

American Liberty No. 2 J. A. Bean, W. Burke Sur., 1 mi. N of Grapeland, approx. 2,200 ft. E of No. 1. Drlg. 1,626 ft.
Ridgeway-Jackson No. 2 H. F. Moore, 1,000 ft. from N and 350 ft. from W of 530-ac. tract, H. Master Sur., 2 mi. SE Crockett. M.I.M.

Leon County

Kelly & Fox No. 1 Bryant, A. M. Coulturn Sur., 1 mi. E Marquez. R.U. shallow test.

Limestone County

Pure Oil Co. No. 16-T Kendrick, P. Vorella Sur., Mexia field. W.O.C. 6,405 ft.
Stanolind O. & G. Co. No. 1 T. Norris, in Thresher Sur., 5 mi. N of Kosse; 6,500-ft. test. Drlg. 630 ft.

Morris County

J. O. Whittington No. 1 Joiner Leasing Co., T.C.R.R. Sur. No. 734, 8 m. NW Naples. M.I.M.

Nacogdoches County

G. C. Collier and Corley No. 1-A A. T. Mast, 14 mi. SW of Nacogdoches, T. S. Lambert Sur., 750 ft. N of No. 1. R.U.

Navarro County

Mrs. Jane Robinson No. 1 Fortson Bros., 175 ft. from N and 930 ft. from W of Eli Smith Sur., 5 mi. NE Corsicana. R.U.
T. Sharpe et al No. 1 E. B. McDowell, T. Jordan Sur., ½ mi. S of Bassets. S.D. 2,300 ft.

Red River County

Roy I. Carter Drlg. Co. No. 1 J. A. Tutt, C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 410 ft.
Cosby, Inc., No. 1 Hocker & Hughes, southern part of county. Top Woodbine 2,853 ft.; drlg. ahead.

Rusk County

J. Merrick et al No. 1 Tippa, T. Uzzell Sur., 6 mi. S of East Texas field. T.D. 3,890 ft.
Nivia Oil Co. No. 1 Citizens Natl. Bank, M. D. Carmel Sur. 2½ mi. SE of Henderson. Drlg. 6,768 ft.
J. W. Shipman et al No. 1 Citizens Bank, J. J. Y'Barbo Sur., 4 mi. NE of Henderson. Drlg. 4,400 ft.

EAST TEXAS

(Border Counties)

Cass County

Bay Oil Corp. No. 2 Geo. Parker, G. Crowder Sur. Drlg. 4,502 ft.
Bay Oil Co. No. 2 Geo. Parker, G. Crowder Sur. Drlg. 5,280 ft.
R. W. Norton No. 1 Hussey, P. Evans Sur. T.D. 6,082 ft.; tstg.
R. W. Norton No. 2 Hussey, P. Evans Sur. Drlg. 3,682 ft.
Ohio Oil Co. No. 20 E. P. Willis, S.F.I.W. Sur. 7-in. 5,972 ft.; T.D. 5,989 ft.
W. G. Ray Drlg. Co. No. 2-B Geo. Parker, G. Crowder Sur. Rg. 5,950 ft.
United Prod. Co. No. 4 Allday, P. Evans Sur. Swbd. dry; S.D.; W.O.
United Prod. Co. No. 7 Bewley, H. Holbert Sur. Drlg. 1,966 ft.
United Prod. Co. No. 4 V. Bivens, J. Collom Sur. Comp.; flw. 64 B.P.D.; T.D. 6,064 ft.
United Prod. Co. No. 1 Baugus Unit, Cass Co. Sch. Ld. Sur. Comp.; flw. 374 B.P.D.; T.D. 6,018 ft.
United Prod. Co. No. 1 fee, H. Holbert Sur. Swbd. dry; S.D.; W.O.
United Prod. Co. No. 2 fee 575, B. Holms Sur. Drlg. 3,030 ft.
United Prod. Co. No. 2 Hutchinson, A. D. S. Coy Sur. Drlg. 1,855 ft.
United Prod. Co. No. 1-A Starke, D. Gilliam Sur. 7-in. 5,975 ft.; T.D. 6,050 ft.
United Prod. Co. No. 2-A Starke, D. Gilliam Sur. Drlg. 5,659 ft.

Harrison County

J. B. Bond et al No. 1 Bailey & Martin, Geo. Martin Sur. Drlg. 3,100 ft.

Marion County—Rodessa

Arkansas-La. Gas Co. No. 1 Emma Ford, A. D. S. Coy Sur. Drlg. 6,066 ft.
Arkansas-La. Gas Co. No. 1 J. P. Fant, L. P. Cadenhead Sur. T.D. 6,183 ft.; arg. P.B.
Fohs Oil Co. No. 2 M. Reynolds, A. D. S. Coy Sur. Drlg. 3,714 ft.
Gulf Prod. Co. No. 1 L. Henderson, R. Bennington Sur. Drlg. 5,975 ft.
Holcomb & Thomason No. 1 L. Henderson, C Lots 4 and 6, R. Bennington Sur. Drlg. 5,324 ft.
Mid-Continent Pet. Corp. No. 2 Sory, A. D. S. Coy Sur. Drlg. 5,052 ft.
Mid-Continent Pet. Corp. No. 3 Sorry, A. D. S. Coy Sur. 7-in. 5,989 ft.; T.D. 6,-054 ft.
Hunter Co. No. 3 Fonda, A. D. S. Coy Sur. Drlg. 5,925 ft.
Shell Pet. Corp. No. 1 L. Henderson, R. Bennington Sur., Lot 8. Drlg. 2,000 ft.

Panola County

Danciger O. & G. Co. No. 1 Tatum, A. Bissell Sur. Drlg. 4,010 ft.
Magnolia Pet. Co. No. 2 E. A. Hull, Thos. Applewhite Sur. Drlg. 7,910 ft.

Shelby County

C. A. Parker, Jr., No. 1 W. D. George, Clement Tutt Sur. S.D. 1,450 ft.; wtr.
Portex Oil Co. No. 3 W. R. Pickering, A. Hanson Sur. Comp.; 75,000,000 ft. gas and 5 bbls. dist. per hr.; T.D. 5,089 ft.
Siler and Riley No. 1 Rushing, M. Smith Sur. S.D. 3,020 ft.; cor. depth.

WEST TEXAS WILDCATS

Andrews County

Amerada Pet. Corp. No. 1 L. Littman sec. 6, Blk. A-29, P.S.L. Sur. T.D. 4,777 ft.; P.B. to 4,369 ft.; S.D.O.
American Liberty O. Co. No. 1 E. Cowden sec. 14, Blk. A-55, P.S.L. Sur. S.D. 5,002 ft.
M. J. Delaney No. 1 E. P. Moore, sec. 12, Blk. A-20, P.S.L. Sur. T.D. 4,579 ft.; to acidize.
Drlg. & Expl. Co. No. 1 Thornberg, sec. 8, Blk. A-42, P.S.L. Sur. Loc.
M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. S.D. 179 ft.
Gulf Oil Corp. No. 1 State, 440 ft. from N and 2,200 ft. from W, sec. 8. Blk. 14. M.I.M.
Landreth Prod. Co. No. 1 L. Jones, sec. 11, Blk. A-42, P.S.L. Sur. T.D. 4,485 ft.; acidized; flowing 25 bbls. per hr.

Bailey County

Etz & Robinson No. 1 Enochs, Tract 68, League 182, Floyd Co. School Lands Sur. Drlg. 1,322 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd. sec. 66, Blk. 10, G.H.&S.A. Sur. S.D. 6,001 ft.
Storey No. 1 Wilson, sec. 3, Blk. 212, T.&St.L. Sur. S.D. 2,545 ft.; no report.

Cochran County

Texas Co. No. 1 Slaughter, Drlg. 4,431 ft.
Pete Wiggins et al No. 1 C. Slaughter Dean, C Lab. 28, League 92, Lipscomb Co. Sch. Ld. T.D. 4,800 ft.; R.U. tools.

Coke County

H. E. Ogden et al No. 1 Rawlins, sec. 390, Blk. 1-A, H.&T.C. Sur. S.D. 515 ft.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 5,405 ft.

Crockett County

Moore Bros. No. 1 P. Perner, sec. 37, Blk. 2, I.&G.N. Sur. T.D. 420 ft.; R.U. machine.
J. N. Simpson No. 1 Hoover, 330 ft. from S and E, sec. 2, Blk. FF, G.C.&S.F. Sur. R.U.S.T.

Dawson County

R. Allbaugh No. 1 Higgenbotham, Labour 24, League 269, Moore Co. Sch. Lds. Loc.
R. Albaugh No. 1 D. Hogg, SE of SE sec. 17, Blk. 34, Twp. 4n, T.&P. Sur. Drlg. 3,500 ft.
E. L. Wilson No. 1 Scanlon, Sec. 83, Blk M, E.L.R.R. Sur. S.D. 4,965 ft.; to test and acidize.

Dickens County

C. E. Litchfield No. 1 Harris, sec. 354, Blk. 1, H.&G.N. Sur. S.D. 1,500 ft.

Edwards County

A. P. Carter No. 1 F. D. Sweeten, S&E sec. 48, Blk. 2, B&B Sur., 1¼ mi. E of Rock Springs. S.D. 700 ft.

Ector County

Fuhrman Pet. Corp. No. 1 E. Cowden, sec. 41, Blk. 43, Twp. 2s, T.&P. Sur. T.D. 3,925 ft.; W.O.C.
Shasta Oil Co. No. 1 K. Sands, sec. 32, Blk. 44, T.&P. Sur. Set csg. 4,284 ft.

Fisher County

Anderson & Kerr No. 1 Caldwell, sec. 169, Blk. 2, H.&T.C. Sur. Coring 3,626 ft.

Gaines County

Amerada Pet. Corp. No. 1 Cox, NW cor. sec. 380, Blk. G, C.C.S.D.&R.G.N.G. Sur. W.O.C. 4,891 ft.
Amerada Pet. Corp. No. 1 Matthews, sec.

417, Blk. G, C.C.S.D.&R.G.N.G. Sur. T.D. 5,018 ft.; fsg.
Argo Royalty Co. No. 1 Jones. S.D. 5,248 ft.
Continental O. Co. No. 1 Jones, sec. 22, Blk. A-7, P.S.L. Sur. T.D. 5,156 ft.; P.B. to 4,815 ft.; to test.
Continental Oil Co. No. 1 Moore, sec. 41, Blk. AX, P.S.L. Sur. T.D. 4,995 ft.; shut in.
R. H. Gill No. 1 S. R. Simpson, 330 ft. from N and 1,534 ft. from E of sec. 8, Blk. C-44, P.S.L. Sur. Spudded.

Hockley County

Frank A. Bates No. 1 Lockett, C of NE of S sec. 5, Blk. 1, P.S.L. Sur. Drlg. 4,033 ft.
Stanolind O. & G. Co. No. 1 A. A. Slaughter, C SW¼ Labour 76, League 37, Zavalla Co. Sch. Lds. Sur. T.D. 4,796 ft.; to test.

Howard County

Iron Mt. Oil Co. No. 1 D. H. Snyder, sec. 28, Blk. 30, Twp. 1s, T.&P. Sur. T.D. 2,900 ft.; fsg. blt.
W. F. McDermott et al No. 1 Lucas, sec. 18, Blk. 29, Twp. 1n, T.&P. Sur., 5 mi. N of Dodge pool. T.D. 100 ft.; S.D.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. T.D. 3,080 ft.; U.R. csg.

Jeff Davis County

J. D. Wilcox et al No. 1 Jones-Coffield. Drlg. 3,247 ft.

Loving County

Barnett Pet. Co. No. 1-A Johnson, sec. 2, Blk. 57, Twp. 1, T.&P. Sur. Drlg. 1,360 ft.
Barnett Pet. Corp. No. 1-B W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Drlg. 325 ft.
Continental Oil Co. No. 1 E. C. Marrs, sec. 20, Blk. 54, Twp. 2, T.&P. Sur. Drlg. 210 ft.

Mitchell County

Harris & Anderson No. 1 A. F. King, sec. 11, Blk. 28, Twp. 1s, T.&P. Sur. Drlg. 3,112 ft.
Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36, Blk. 29, Twp. 1n, T.&P. Sur. S.D. 3,157 ft.

Nolan County

M. S. Ingleright & L. E. Hults No. 1 Blank, Blk. 1-A, H.&T.C. Sur., near Decker, 4,000-ft. test. Loc.

Pecos County

K. Kimberlin No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. T.D. 1,675 ft.; bailing wtr.
S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. Fsg. 5,804 ft.
Trans-Pecos Oil Co. No. 1 Popham. T.D. 535 ft.; lost hole; skd. 25 ft. south; now drlg. 375 ft.
W. K. Tully No. 2 Perry. T.D. 1,920 ft.; est. 15 bbls. oil day.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk. 12, G.H.&S.A. Sur. S.D. 4,375 ft.
Sadler Bros. et al No. 1 Bagley. S.D. 3,315 ft.

Reagan County

K. E. Sherman No. 1 W. E. Friend. SW cor. sec. 3, Wm. Allen Sur. S.D. 2,072 ft.
Moore Bros. No. 1 University, sec. 8, Blk. 7. T.D. 2,530 ft.; set csg.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur., 12 mi. NW of Toyah Drlg. 1,431 ft.
General Crude Oil Co. No. 1 T. P. Land Trust, C NE¼ sec. 15, Blk. 56, Twp. 2, T.&P. Sur. S.D. 3,390 ft.; showing oil and wtr.

Runnels County

Hall Oil Co. No. 1 Beddo, sec. 51, Thompson Casey Sur. R.U.R.
K. Z. Oil Co. No. 1 B. Fletcher, E. C. Good Sur. Drlg. 2,805 ft.
Stevens & Glover No. 1 Fowler, sec. 150, T.C.R.R. Sur., 2 mi. NE of Ballinger T.D. 1,095 ft.; salt wtr.

Schleicher County

W. Cooper No. 2 B. Page, sec. 40, Blk. L, G.H.&S.A. Sur. Drlg. 4,370 ft.
Tex-Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. Drlg. 2,452 ft.

Scurry County

C. W. Guthrie et al No. 1 F. W. Hardee, sec. 99, Blk. 97, H.&T.C. Sur., S.D.
Robinson Drlg. Co. No. 1 Martin. 1,980 ft. from S and 660 ft. from W, sec. 147, H.&T.C. Sur. M.I.M.

Sterling County

Wilcox O. & G. Co. No. 1 Kinnebrew Est., 1,320 ft. from N and W, sec. 101, Blk. 2, H.&T.C. Sur. Drlg. 220 ft.

Sutton County

Ordovician Oil Co. No. 1 Evans. Drk.

Terry County

Anthony & Rice No. 1 Brownfield, C NW¼ sec. 28, Blk. A-1, E.L.R.R. Sur. T.D. 4,536 ft.; to drlg. plug.
R. L. Foree No. 1 A. E. Pool, sec. 54, Blk. D-11, D.&S.E. Sur. S.D. 4,913 ft.

Upton County

Maverick Oil Co. No. 1- Holmsley, sec. 16, Blk. B, C.C.S.D.&R.G.N.G. Sur., 14 mi. NE of Rankin. Drlg. 3,718 ft.

Ward County

F. H. Murphy et al No. 1 Monroe, sec. 210, Blk. 34, H.&T.C. Sur. S.D. 5,000 ft.; Del. sd. 4,925 ft.
Mahres No. 1 Wilson, sec. 133, Blk. 34, H.&T.C. Sur. T.D. 5,094 ft.; P.B. to 5,092 ft.; S.D.
L. F. White et al No. 1 Rector-Monroe, E cor. sec. 3, Blk. 1, W.&N.W. Sur. Top Del. L. 4,635 ft.; top Del. sd. 4,670 ft., T.D. 4,710 ft.; testing.

Yoakum County

Bohago & Bond No. 1 West, sec. 606, Blk. D. T.D. 5,255 ft.; swbg. and tstg.; gr. 31.6.
Denver Dev. Co. No. 1 Whittenburg, sec. 831, Blk. D, J. H. Gibson Sur. Reacid.; flwg. 10 to 15 B.P.H.
Moore Bros. No. 1 Cleveland, sec. 706, Blk. D, J. H. Gibson Sur. Cg. 5,325 ft.
Standard of Texas No. 1 M. B. Sawyer, 660 ft. from S and E, sec. 576, Blk. D, J. H. Gibson Sur. Cellar.
Texas Co. No. 1 Walker, sec. 794, Blk. D Drlg. 4,963 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

C. R. Cox, Tr. No. 1 Jan Lee, 1,220 ft. from N and 600 ft. from E of SW¼ sec. 11, B.B.B.&C. Sur., NE cor. county. Loc.
W. T. Daniels et al No. 1 Joyner, 1 mi. S Brownwood, T. Smith Sur. No. 600, Abst. 821. Drlg. 675 ft.
Garland Moore et al No. 1 T. S. Williams, 1 mi. NE Grosvenor. Sec. 40, H.T.&B. Sur., Abst. 2037. Spdg. & S.D.

Callahan County

Hal Hughes No. 1 Poindexter, 330 ft. fr. N&E of sec. 350, Geo. Hancock. Sur. 2 mi. NE of Oplin. S.D. for water.
J. C. Jackson et al No. 1 Thompson, 2 mi. S Eula, sec. 30, B.B.B.&C. Sur. S.D. 1,350 ft.
Hugh King, Jr. et al No. 1 K. B. Legett, 7 mi. W Clyde, sec. 7, Blk. 8, S.P.R.R. Sur. Top sand 1,778 ft.; est. 500,000 ft. gas.
Phillips Pet. Co. No. 1 Cozart, 1 mi. NW Scranton, 330 ft. from N and E lines of farm in M. Cherry Sur. Loc.
R. F. St. John No. 1 J. A. Hinshaw, Subd. 9, sec. 29, S.P.R.R. Sur., Blk. 8. Drlg. 1,710 ft.
Ungren & Frazier No. 1 Ross Est., 1 mi. NW of Baird, 220 ft. from S and W of N½ N¼ sec. 103, B.B.B.&C. Sur. Drlg. 950 ft.

Coleman County

Dixie O.&G. Co. No. 1 Reaves, 6 mi. NW Bangs, J. M. Rhine Sur. No. 629. S.D. 805 reprs.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. I. Terry, Desdemona pool, N. H. Kuyker dall Sur. T.D. 4,165 ft.; U.R. 8¼-in. csg.

Eastland County

G. D. Chastain et al No. 1 Weddington, 4 mi. N Cisco, 330 ft. from N and W of sec. 496, S.P.R.R. Sur. R.U.S.T.
Monark O. & G. Co. No. 1 Downtain, sec. 14 H.&T.C. Sur. Blk. 4, 3 mi. N Eastland. S.D. 1,250 ft.

Erath County

Jess Hickey et al No. 1 W. M. Martin, 2 mi. SE Desdemona, D. J. Otho Millard Sur. A-533. Top sand 2,835 ft.; good show oil through cavings; S.D. for 6⅝-in. csg.

Haskell County

E. W. Marland & H. B. Drake No. 1 Corothers, 6 mi. S Haskell, sec. 67, D. E. Zaaz Sur. S.D. 2,280 ft.

Jack County

Bennett Pet. Corp. No. 1 J. S. Rhodes, 2½ mi. NE Bryson, 250 ft. from S and 330 ft. from W of W. Higgins Sur., Abst. 2,199. Loc.
J. P. Burrus No. 1 W. J. Eatherly, J. Helmstutler Sur. T.D. 1,200 ft.; drlg. by tools.
G. M. Gillespie No. 1 O. Loving, sec. 3345, T.E.&L. Sur., 2 mi. SE Jermyn. O.S. 3,169-74 ft.; T.D. 3,211 ft.; rng. 5-in.
W. H. Hammon No. 1 Rhodes, 1 mi. N Rhodes pool. Sd. 2,926-38 ft.; shot 60 qts.; C.O.
Hanlon-Buchanan, Inc., No. 1 Lindsey, 7 miles NW of Jacksboro, 990 ft. from E line and 330 ft. from S line, I. N. Wright Sur., Abst. 898. Drlg. 2,300 ft.
H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. S.D. 1,831 ft.
Nelson Oil Synd. No. 1 Henderson, 2 mi. SW Bryson, 330 ft. from N line and 990 ft. from E line of farm in A. S. Ensworth Sur., Abst. 1,789. Loc.
Panhandle Ref. Co. No. 1 D. R. Sewell, 4 mi. E of Bryson, 3,641 ft. from S line and 990 ft. from W line, Mary Hamilton Sur., Abst. 262. Drlg. 2,835 ft.
R. A. Westbrook No. 1 W. Knox, sec. 83, B.B.B.&C. Sur. Drlg. 3,000 ft.
Joe Worsham et al No. 1 Cash, 3½ mi. NE of Bryson, 990 ft. from E and 330 ft. from S lines of farm in I. White Sur., Abst. 895. Drlg. 1,823 ft.

Jones County

Brown Eagle Oil Co. et al No. 1 Glaze, 2 mi. E Hawley, 220 ft. from N and W of Subd. 5, R. Smith Sur. No. 192. Spdg.
E. P. Campbell No. 1 Minter, 4 mi. N Hawley, 220 ft. from N and 150 ft. from E of S½ SE¼ sec. 26, T.&P. Sur., Blk. 15. Drlg. 1,825 ft.
Fain & McGaha Oil Corp. No. 1 Akens, 3 mi. SW Hawley, 220 ft. from N and F of sec. 18, T.&P. Sur., Blk. 16. Drlg 1,840 ft.
Fain & McGaha Oil Corp. No. 1 Minter, 3 mi. NW Hawley, Lot 12, Robt. Smith Sur. No. 192. Drlg. 1,460 ft.
Fain & McGaha Oil Corp. No. 1 J. H. Wheeler, 3 mi. NW Sandy Ridge pool, sec. 55, O.A.I. Sur. S.D. 2,225 ft.
M. A. Mead No. 1 H. Osment. S.D. 500 ft.
Murray & Harrison et al No. 1 Little, 3½ mi. NE Avoca, 330 ft. from N and W of SW¼ sec. 172, B.B.B.&C. Sur. Drlg. 1,100 ft.
W. H. Peckham No. 1 Davis et al, 3 mi. SW Lueders. Subd. 8, F. M. Smith Sur. No. 3. S.D. 2,084 ft.
Shaheen Oil Co. et al No. 1 Jenson, 2 mi. E Avoca, 330 ft. from N and E lines of S½ of SE¼ sec. 198, B.B.B.&C. Sur. Spdg.
Riddle et al No. 1 J. D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. T.D. S.D. 2,245 ft.
Southern Oil Co. No. 1 B. W. Thane NE cor. County. Andrew Jones Sur. 114. S.D. 1,200 ft.
A. G. Swanson No. 1 Manley, 7 mi. S Nugent, 660 ft. from S and E of SW¼ sec. 46, T.&P. Sur., Blk. 14. Drlg. 1,410 ft.
Ungren & Frazier et al No. 1 Carl Ecdahl, 3½ mi. NE Avoca, 330 ft. from S and E of NW¼ sec. 188, B.B.B.&C. Sur. Spdg.
Ungren & Frazier et al No. 1 S. W. Harvey, 3 mi. SE Nugent, sec. 20, Blk. 14, T.&P. Sur. Drlg. 1,812 ft.
Ungren & Frazier No. 1 Melton, 4½ mi. SW Hawley, 1,100 ft. from N and E of farm in John Winters Sur. Drlg. 1,900 ft.
Ungren & Frazier & West No. 1 Southard, 3 mi. SE Avoca, 330 ft. from N and W of SE¼ sec. 202, B.B.B.&C. Sur. Loc.

Palo Pinto County

W. H. Clement No. 1 Federal Life Ins. Co., 2 mi. W Mineral Wells, 600 ft. from N and W of SE¼ sec. 51, T.&P. Sur., Blk. A (E of B). S.D. for pipe 400 ft.
Bill Cole et al No. 1 J. W. Harris Est., NW cor. county, 330 ft. from E line and 2,170 ft. from S line of Fr. De La Garza Sur. Drk.
Paul Garrett No. 1 Mabry heirs, NE cor. county, sec. 2,572, T.E.&L. Sur. S.D. 470 ft.
Henry Hobbs et al No. 1 Bessie Holt, 4 mi. S. Graford, sec. 1,783, T.E.&L. Sur. S.D. 200 ft.
Lone Star Gas Co. No. 1 Hart Oil Corp., CWL county, 2,665 ft. from E and 2,667 ft. from S of sec. 19n, T.&P. Sur., Blk. 3. 4,000-ft. test; drlg. 400 ft.
Earnest Lloyd et al No. 1 Bailey, 3 mi. NE Graford, sec. 2,003, T.E.&L. Sur. S.D. 1,802 ft.

Shackelford County

Humble O. & R. Co. No. 4 Geo. DeLafosse, E C line county, sec. 1550, T.E.&L. Sur. T.D. 4,434 ft.; P.B.
M. P. Moore et al No. 1 Geo. Gray, W side Bluff Creek pool, sec. 208, E.T.R.R Sur. L. 1,813-16 ft.; U.R. 6⅝-in.

Stephens County

Barnett Pet. Corp. No. 1 J. Q. Corbett, 4 mi. SE Ivan, sec. 3, S.P.R.R. Sur., Blk. 3. Drlg. 3,295 ft.
Clark & Cowden et al No. 2 Echols Heirs, Blk. 3. Fsg. bailer 4,005 ft.
Cox & Caprito No. 1 Donnell, 1 mi. SW Eliasville, sec. 1,208, T.E.&L. Sur. Rng. 6⅝-in. to 2,900 ft.
Dean Bros. & Fortex Oil Corp. No. 1 Watson, 5 mi. SW Caddo, sec. 28, T.&P. Sur., Blk. 6. Drlg. 975 ft.
W. B. Hamilton No. 1 B. O. Grant, CWL of county, 1,452 ft. from N and 2,384 ft. from W of sec. 63, B.A.L. Sur. 2,500-ft. test; drlg. 650 ft.
O. J. Perren No. 1 J. K. P. Hughes, NE cor. County of NW¼ sec. 6 A.B.&M. Sur., Abst. 2,683. Drlg. 3,750 ft.
Philtop O. & G. Co. No. 1 T. M. Corbett, 8 mi. NE Caddo, Edward Romershausen Sur., Abst. 149. Sd. 3,952-57 ft.; T.D. 4,008 ft. treated with 3,000 gals. acid, tstg.
W. J. Rhodes No. 1 Black Bros., 8 mi. NE Breckenridge, sec. 1,135, T.E.&L. Sur. Drlg. 2,465 ft.

Stonewall County

General Crude Oil Co. No. 1 W. J. Bryan, 7 mi. N Hamlin, Subd. 10, Wm. Vardeman Sur. No. 347. Cored sd. 4,347-52 ft.; T.D. 4,380 ft.; C.O.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis, 2 mi. S Arlington, H. Blackwell Sur. S.D.O. 2,140 ft

Taylor County

Louis Davis No. 1 E. Lincicum, NE cor. county, 350 ft. from N and 500 ft. from E of NW¼ sec. 21, B.A.L. Sur. Drlg. 1,600 ft.

Throckmorton County

Carl B. Bailey No. 1 Mrs. Minnie Smith, NE cor. county, 1,854 ft. from N line and 450 ft. from W line, sec. 2,440, T. E.&L. Sur. S.D. 1,500 ft.
G. C. Foster No. 2 Brown, 5 mi. NW Woodson. 2,477 ft. from E. 536 ft. from S of sec. 920, T.E.&L. Sur. Drlg. 1,250 ft.

Wise County

Latex Oil Co. No. 1 Smith, 3 mi. E of Bridgeport, Jas. Couch Sur. T.D. 3,850 ft.; prep. to core.

Canadian Fields

(Continued from Page 90)

In the Steveville area, Anaconda Oil Co. No. 1, LSD 15, section 9-22-12w4, is fishing in a sticky shale formation at 615 feet.

On the Blood Indian Reserve about 30 miles southwest of Lethbridge, Harry M. B. Inglis is supervising a series of core-drill structure tests for Dexter Oils, Ltd., of Vancouver, British Columbia.

East-Central Alberta

In the Wainwright field, East-Central Alberta, Montreal-Alberta Oils No. 1, LSD 2, section 15-45-7w4, bottoming in the lime around 3,390 feet, has completed a water shutoff and may be deepened.

On the Battleview anticline, 22 miles northeast of Wainwright, Battleview Oils No. 1, section 32-47-5w4, has cemented 8-inch casing at 1,894 feet and is testing production from the oil and gas sand encountered at 1,871 feet.

In the Ribstone field, Dina Oil & Refining Co. No. 4, LSD 13, section 9-45-1w4, is drilling below 250 feet. Dina No. 3, LSD 14, same section, is being placed on production. The company has erected a small refinery in the field, 30 miles south of Lloydminster and 3 miles west of Saskatchewan-Alberta boundary, and is producing three grades of distillate, as well as diesel oil and asphalt, from the heavy crude. The Dina company has rigged for a test for gas for the Lloydminster Gas Co. on the Saskatchewan side, 2 miles southeast of Lloydminster.

Drilling in Ontario

In the Brownsville field, Oxford County, Ontario, Western Ontario Natural Gas Co. (W. J. Aikens) No. 6, Lot 24, Concession 11, Dereham Township, finished at 908 feet with a flow of 20,000,000 feet a day. This is the largest well yet completed in the Brownsville area. Aloka Oil & Gas Co. No. 12, Lot 25, Concession 11, finished in the same horizon with 1,500,000 feet a day. Aloka No. 13 has been spotted in NW quarter Lot 27, concession 12, considerably west of the proven field.

In Chatham Township, Kent County, Union Gas Co. No. 15 has been located in E half Lot 10, Concession 13. Union No. 14, Lot 8, Concession 13, is below 800 feet. Ogletree Syndicate No. 2, Lot 13, Concession 5, is in the granite below 4,250 feet.

In Raleigh Township, Kent County, Salina Gas & Oil Co. No. 2, Lot 12, Concession 15, is below 800 feet.

In the Petrolia field, Lambton County, McIntosh Oil & Gas Co. No. 1 deep test, Charles Barrett property, east of Petrolia, is below 3,550 feet after getting the Trenton limestone at 3,135 feet.

In Perth County, Volcanic Gas & Oil Co. No. 2 William W. Cook farm, NW quarter Lot 28, Concession 6, North Easthope Township, finished a dry hole in the Big Red formation at 1,225 feet and is being abandoned.

In Essex County, Eugene Coste & Co. No. 1, SE quarter Lot 5, Concession 8, Tilbury West Township, is at 1,400 feet with a hole full of salt water, and will probably be abandoned.

Drilling Contractors

(Continued from Page 73)

Texas Gulf Coast the past two weeks, four were wildcats. One is in Chambers County for the Merit Oil Co., two in Hardin County for Coronado Oil Co. No. 1 Ryan in the J. G. Bell Survey, and one for Humble Oil & Refining Co. in the northeast part of the county in the S. R. Fisher Survey. In the Needville area, Fort Bend County, Humble Oil & Refining Co. No. 1 F. H. Schulze is located in the Robert Hodge Survey.

PERSONAL

J. W. WALLACE, representative in charge of sales in the Tulsa district for Texas Company, has returned from a two weeks' trip to New Mexico and Colorado.

MURRAY M. DOAN, Tulsa oil executive who has been seriously ill at Colorado Springs, Colo., for some weeks, is steadily regaining his health and will return to Tulsa about October 1.

C. W. SEIBEL, supervising engineer of the United States helium plant at Amarillo, Tex., received the honorary degree of doctor of science at the summer commencement of Texas Technological College in Lubbock, Tex., last week. The degree was conferred by DR. BRADFORD H. KNAPP, president of the college, in "recognition of research and development in connection with the helium industry." Doctor Seibel is a graduate of the University of Kansas.

H. R. BARBOUR has been named assistant general manager of the Huasteca Petroleum Company and its associated units in Mexico. Mr. Barbour has spent 16 years in oil business in Mexico.

ROGER W. RICHARDSON, former member of the technical staff of the Standard Oil Company of Louisiana in Baton Rouge, has been transferred to the Esso Laboratories of the Standard Oil Development Company, Bayway, N. J., to direct work on motor oils.

CHARLES C. HART, formerly United States minister to Iran and now vice president of the Amiranian Oil Company and Inland Exploration Company, has returned to Iran after conferring in London with JOHN M. LOVEJOY, president of the Seaboard Oil Company of Delaware. Amiranian and Inland Exploration are subsidiaries of Seaboard.

DR. N. E. LOOMIS has been appointed vice president in charge of research development for the Standard Oil Development Company, New York, and R. H. DICKSON was made general secretary,

N. M. HUTCHINSON, production engineer for the Kansas division at Oil Hill, of Cities Service Oil Company, has been transferred to Bartlesville, Okla., and R. C. HAUBER, production engineer in the Bartlesville office, replaced him.

D. P. NEILL, formerly with the Danray Oil Company, is now production superintendent for the Buckingham Oil Company and Eleanor Oil Company, associated firms with production and acreage in the Corpus Christi district of Southwest Texas.

W. M. AVERILL, who has charge of the pipe line and distributing activities of the Pure Oil Company in North Texas, has been appointed manager of the American Mineral Spirits Company of Texas, an affiliated unit of the Pure company. He will be succeeded by R. D. McCLARIN, who has been zone manager in Ohio for the Pure company.

J. A. HAYES, scout and land department man for the Texas Company, has been stationed at Hattiesburg, Miss., by that company.

EARLE R. WALL, with the land and geological department of the Standard Oil Company of Texas in Houston, Tex., is spending his vacation in Tennessee.

SHEP MIERS, representing the Kerotest Company, is on an extended trip to the Northwest and Canadian points, en route to Banff, where he will stop on business.

K. W. SHIMEALL, refinery manager for the Crown Central Petroleum Corporation at Houston, Tex., is motoring with his family in California on a two weeks' vacation. He is expected back in Houston late this week.

R. J. ST. GERMAIN, independent oil operator, Houston, Tex., has left for the lake district of northern Minnesota, where he will spend the next six weeks on vacation. He will return by way of Illinois to look over the new oil development there.

LEWIS EMERY III, Bradford, Pa., oil man and world traveler, recently entertained with a cocktail party in Venice, Italy, in honor of the DUKE and DUCHESS of WINDSOR and MR. and MRS. HERMAN ROGERS of Cannes, France, and New York City.

JOHN E. FARRELL, Fort Worth, Tex., oil operator who has properties producing and under development in Texas, Louisiana and New Mexico, was a visitor in New York last week. He was accompanied by MRS. FARRELL and daughter, VIRGINIA JANE.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The deepest wells ever drilled in Pennsylvania are Louis Kraer's test in Sheffield Township, Warren County, abandoned at 5,280 feet, and T. D. Collins and others test in Mayburg in Forest County now at 5,240 feet with a string of drilling tools and the fishing tools lost in the hole.

Mrs. H. H. Rogers, widow of the former vice president of the Standard Oil Company of New Jersey, dies suddenly in a dining car in the Grand Central Station in New York on August 30. She had been a sufferer from heart disease for some time.

James P. Flanagan, of the Bovaird Supply Company, gets a 500-barrel well in the Schulter pool in Okmulgee County, Oklahoma.

20 YEARS AGO

Oil is discovered in Greenwood County, Kansas, by the Great Southern Oil Company, on the Hull farm in section 2-28-8. The first well made 200 barrels a day initially.

Trapshooters Oil Company, discoverer of the Towanda field in Butler County, Kansas, sells out to Eureka Oil Company for a reported $1,500,000.

Calvin A. Dorn is made assistant treasurer of the Sinclair Gulf Corporation.

The Midwest Refining Company will lay a 4-inch pipe line to convey casinghead gasoline from its proposed casinghead plant in the Salt Creek fields to Casper, Wyo.

10 YEARS AGO

The National Petroleum Association will celebrate its twenty-fifth anniversary at Atlantic City, N. J., September 14-15-16.

The six wells in the Little River pool, Oklahoma, can produce 40,000 barrels, but are cut down to 17,000 barrels.

The Standard Oil Company of New Jersey now has over 100,000 employes, including those working for wholly or partly owned subsidiaries.

C. H. LYONS, well-known Shreveport, La., independent oil operator, is on a vacation trip in Wisconsin.

H. M. STEVENSON, chief engineer, Humble Pipe Line Company, Houston, Tex., is spending his vacation at Biloxi, Miss.

A. H. WEYLAND, general superintendent of Arkansas Pipe Line Corporation, Shreveport, La., is on vacation.

E. B. HUTSON, paleontologist for the Standard Oil Company of Louisiana, Shreveport, is spending his vacation in Yellowstone national park.

E. C. KINCADE, vice president of Gulf Refining Company in charge of the pipe line department, Houston, Tex., division, is taking an extended vacation, expecting to be away until October.

JOHN J. DOYLE, land man in the southeast Louisiana district for Humble Oil & Refining Company with headquarters at Lake Charles, is spending his vacation at Hot Springs, Ark.

MRS. EDWARD L. DOHENY has been elected president of Petroleum Securities Company, Los Angeles, Calif., succeeding the late ROBERT M. SANDS, who died while on a vacation in England last year.

A. R. McCOY, superintendent of the Texas Company refinery in Shanghai, China, is believed to be safe, according to relatives in Port Arthur, Tex. Mr. McCoy is at present in Manila, after making the eventful trip aboard the President Jefferson, which arrived in Manila in time for the local earthquake.

PARAGRAPHS

E. J. SADLER, vice president, Standard Oil Company (New Jersey), is heading a party of officials of Standard Oil Company (New Jersey), Imperial Oil Company, Ltd., Carter Oil Company, Oklahoma Pipe Line Company and Standard Oil Company of Louisiana making an inspection trip through the producing and refining areas of Indiana, Illinois, Kansas, Oklahoma, Louisiana and Texas this week. Others in the group are F. W. ABRAMS, president, Standard Oil Company of New Jersey; T. R. ARMSTRONG, H. G. BURKS, S. P. COLEMAN, G. W. GORDON, W. J. HALEY, E. A. HOLBEIN, E. HOLMAN, H. H. HILL, WINTHROP ROCKEFELLER, E. W. MURPHREE, R. P. RUSSELL, CHESTER F. SMITH, E. P. SALISBURY, H. L. SHOEMAKER, E. F. JOHNSON, WALLACE E. PRATT and RICHARDSON PRATT, all of Standard Oil Company of New Jersey; L. C. McCLOSKEY and B. A. MYERS, Imperial Oil Company, Ltd.; C. H. LIEB, president; J. J. CONRY, vice president, and L. F. McCOLLUM, F. W. FLOYD and H. F. MILLER of Carter Oil Company; W. R. FINNEY, president, Oklahoma Pipe Line Company, and J. R. McWILLIAMS, vice president, Standard Oil Company of Louisiana.

GEORGE W. JAMES, banker and independent oil operator of El Dorado, Ark., is spending his vacation in Michigan.

FRANK G. MOFFETT, JR., of Houston, Tex., is leaving the States for Caripito, Venezuela, where he will be associated with the Standard Oil Company of New Jersey interests.

RUSSELL S. KNAPPEN of the Gulf Oil Corporation, Tulsa, MRS. KNAPPEN and daughter, MARGARET ANN, have returned to Tulsa from a trip through the Canadian Rockies and Yellowstone and Glacier national parks.

WILLIAM C. McDUFFIE, Los Angeles, Calif., former receiver for the Richfield Oil Corporation, has resigned as chairman of the executive committee and director of the company and will devote his attention to personal matters following an extended vacation.

A. S. HAYES, petroleum engineer with the Kettleman North Dome Association since its inception and before that with the General Petroleum Corporation for 10 years, has resigned his position with the association to join Bell & Loffland, California drilling contractors.

P. J. MINCK has been appointed manager of the municipal gas plant in Paulsboro, N. J. He was formerly a resident of Tulsa and associated with the late CHARLES PAGE in the Eastern Oklahoma Power & Light Company. His last project before accepting the Paulsboro appointment was the Eastern Shore Gas Company a group of gas properties which he built serving Maryland, Virginia and Delaware.

R. E. HILPERT, formerly general superintendent of drilling and production for W. C. McBride, Inc., St. Louis, Mo., has joined Dowell, Inc., at Midland, Tex.

F. T. CARPENTER has joined the Detroit, Mich., staff of the Phillips Petroleum Company Philgas department. Mr. Carpenter, graduate of Drake University in 1921, was formerly superintendent of construction for the American Gas Construction Company and its successor, the C. I. Tenney Engineering Company.

J. H. PAGE, petroleum engineer of Tulsa, and J. S. HAELY, repressuring engineer, Olean, N. Y., have been named as assistants to E. G. DAHLGREN, director of oil and gas conservation division, Kansas Corporation Commission. Mr. Page will head the natural gas department and Mr. Haely will assist MARVIN LEE, technical adviser.

CLIFFORD JOHNSTONE, managing director of the Pacific Coast Gas Association, has left his San Francisco office for a fishing trip on Feather River, California.

ARTHUR C. BECKNER, engineer in charge of the Hewitt, Okla., station of the Oklahoma Pipe Line Company, has received a 30-year service button. Mr. Beckner began as a fireman and then became an engineer. He has been in charge at Hewitt since January 1, 1927.

JAMES R. SLOANE, until recently vice president of the James B. Berry Sons Company, Oil City, Pa., has resigned from that organization and is now vice president of the Oil Trading Company, Inc., a brokerage organization of New York. Mr. Sloane was affiliated with the James B. Berry Sons Company, independent marketing and refining organization, 18 years, 9 years of that time in New York.

Joined Atlantic as a Boy

Robert C. Tuttle, vice president, director and general manager of transportation of the Atlantic Refining Company, was born in Allentown, Pa., in 1893, and after attending the public schools of that city he added a course in shorthand. At the age of 17, he got a job as stenographer in the order and shipping department of the Atlantic's general offices in Philadelphia. In 1915 he was made assistant manager of the department. Five years later he was advanced to manager of the marine department. In 1931 Mr. Tuttle was elected to the board of directors and made general manager of transportation.

ROBERT C. TUTTLE

When Robert H. Colley recently was promoted from vice president to president Mr. Tuttle was chosen to succeed him in the former office. He continues as head of the transportation department and as vice president and director of the Atlantic Pipe Line Company, Keystone Pipe Line Company and Atlantic Oil Shipping Company. He is a vice president and director of the Philadelphia Maritime Exchange, director of the Port of Philadelphia Ocean Traffic Bureau and a member of the executive committee of the American Steamship Owners Association. With it all he manages to find time for an occasional game at the Overbrook Golf Club. He is a member of the Union League Club of Philadelphia and the Traffic Club of Philadelphia.

RALPH TALLEY, head of the Magnolia Petroleum Company's land department, is on vacation in Mississippi.

L. A. FOUGLER has been elected a member of the board of directors and secretary of the Inglewood Gasoline Corporation, Long Beach, Calif.

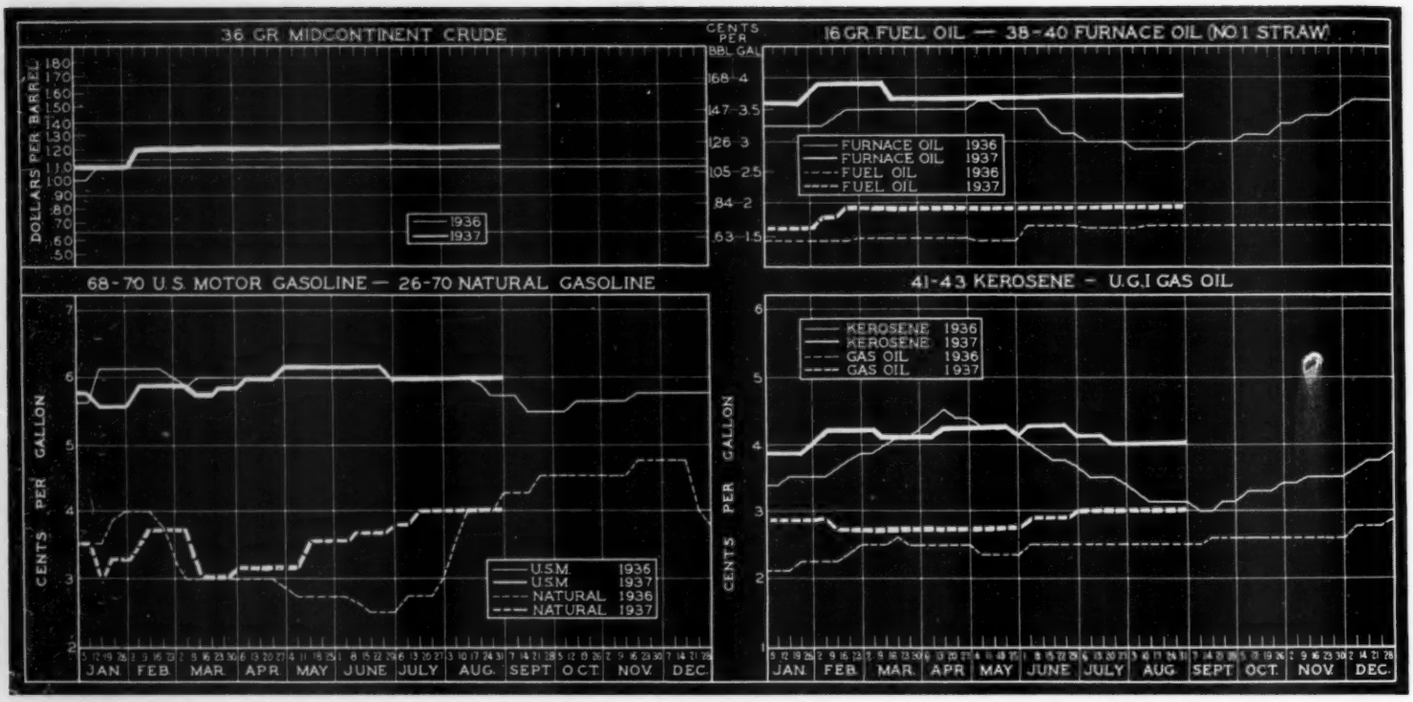
CHARLES ROUP, district geologist in Kansas for the Indian Territory Illuminating Oil Company, has returned from a vacation trip to the Black Hills in South Dakota.

O. C. BAILEY, independent oil operator of El Dorado, Ark., and chairman of the Arkansas Board of Conservation, enjoyed his vacation at Battle Creek, Mich., during August.

JOSEPH F. JONES, manager of the Joplin Refining Company, Joplin, Mo., was united in marriage to MISS MARY GOUVION of St. Paul, Kans., on Wednesday, September 1. They left at once for a western wedding trip.

WILLIAM S. ARTHURS, chief scout of Skelly Oil Company, Tulsa, has returned to his desk after an absence of two months. Taken ill while on vacation, he suffered from malaria, and later was stricken with a leg malady that required an operation.

T. O. EDWARDS, JR., of the Associated division, Tide Water Associated Oil Company, a member of the technical staff since 1921, has been appointed general superintendent of the company's Avon refinery. He succeeds W. P. HUGO, who has been appointed manufacturing manager in charge of all activities of the operating department.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Better Feeling Displayed in Group 3 as States Act to Curb Production

By D. H. STORMONT

A better feeling was evident in the Group 3 market this week following the decisions of three of the country's leading oil-producing states to substantially reduce their allowable production for September. The high rate of crude production has been exerting a depressing influence on refined oil markets throughout the season of heaviest demand. Therefore, with daily production cut back to present consumption needs, the general belief is that the tankcar market will be somewhat steadied. Oklahoma and Kansas commissions have ordered permitted outputs in September to be reduced below the Bureau of Mines estimates. In Texas the daily allowable for September was reduced although still exceeding bureau estimates.

Heavy Labor Day Buying

The tankcar gasoline market, reflecting heavy buying for Labor Day demands, was in a slightly better position this week although a tone of uneasiness still prevails. Movement of gasoline on contract held at high levels during the week and jobber buying showed a decided increase as orders for delivery the first week in September poured upon refiners. A few independent refiners reported they were behind in shipments and were obtaining material from other refiners. Some gasoline, mostly of very low octane value, was reported available at concessions with but few buyers. In northern Group 3 market territory tank-wagon prices were still below normal in some points. In the Chicago area a drive by the gasoline retailers association resulted in practically all cut-price placards being taken down. Thus while price cutting may still continue, the fact is not flaunted to the motoring public.

Refined Oil Market Barometer

Large-scale buying for the Labor Day holidays and decisions of leading oil-producing states to lower their September allowables acted to improve tankcar gasoline markets in the Middle West and East Coast. Record-breaking consumption is expected in all areas. Naturals feeling effect of September 1 contract shipments. Furnace oils strengthening.

MID-CONTINENT. Gasoline improved. Naturals tightening. Heating oils firm.

EAST COAST. Retail gasoline prices continue disturbed. Heating oils firm.

GULF COAST. General market firm. Burning oils gathering strength.

CALIFORNIA. Diesel and gas oils lower. Gasoline steady. Kerosene slow.

PENNSYLVANIA. Kerosene up. Bright stocks and neutrals improved.

CHICAGO. Tankcar gasoline firm. Heating oils improved. Kerosene steady.

The small number of refineries now operating in East Texas, less than 10 plants, is serving to greatly reduce the tankcar shipments from that area. The latest report of the federal tender board for that area reveals that only 880 cars were shipped during the week ending August 22, 532 of which were gasoline. In contrast, this area one year ago shipped 1,306 cars, 761 of which were gasoline shipments. The reports also show that refiners in East Texas are selling a substantially greater percentage of their refined products under state tenders than at this time a year ago.

Natural gasoline remained in a strong position this week, urgent buying pointing to the probability of higher prices in the very near future. Demand for the various grades is increasing as refiners, having placed orders for shipment on September 1, began blending their winter specification motor fuels. Stocks of naturals are in good position, the field stocks being kept to low levels due to good buying in both export and domestic markets.

Furnace Oils Strengthen

Furnace oils were in excellent demand with tightening of quotations as refiners, believing they see a brisk demand for this material a little later, were in no hurry to sell at current prices. Some observers, basing their opinions on market conditions in the past two winters and on the large number of furnaces installed during the year, forecast an excellent market for the various grades of burning oils throughout the winter. And, if the winter is extremely cold, a decided shortage.

Kerosene, tractor fuels and the light distillates continued to experience a gratifying movement as a steadily increasing demand serves to keep the market for these products in firm condition. The situation this fall is in exact reverse to that of a year ago when these products were feeling the effects of an abnormally low demand caused by the drouth. Rural areas generally are in a much better position than at this time last year and the nearness of the harvesting season should continue to keep demand for these products at high levels.

Gas oil was in a strong position and the heavier fuels making a good showing. Wax remained firm.

East Coast Retailers Stocking Heavily Anticipating Triple Holiday Demand

By H. STANLEY NORMAN

NEW YORK, Aug. 31.—Faced with the summer's third triple holiday week-end, refiners in the north Atlantic market prepared last week to close the 1937 "motoring season" with record-breaking pump throughput.

Coming on the heels of nearly two weeks of inclement or threatening weather, pent-up plans of motorists for trips to nearby beaches, scenic attractions, pleasure resorts or visits with friends in the vicinity of New York probably will be vented in a last big splurge of driving. Refiners reported last week that their bulk plants were placing repeated calls for gasoline and in turn said that retail dealers were stocking heavily in anticipation of heavy consumer demand.

Although much weather favorable to motor trips probably will remain during September and early October, the triple Labor Day week-end affords the summer's last opportunity for extended driving with reasonable assurance of warm, if not clear, conditions.

Including A.P.I. figures through August 21, finished and unfinished motor fuel stocks have been reduced by nearly 7,500,000 bbls. since July 1 and observers anticipate that at least another 2,000,000 bbls. will have been withdrawn before the upward swing starts in the middle or latter part of September. Although retail gasoline markets in the large consuming centers of the northern Atlantic Coast district remain disturbed, the tankcar prices established in the latter part of June and first of July have held reasonably firm. The prevailing base price for tankcar deliveries is 8 cents per gallon in New York and 7½ cents per gallon in New Jersey for 65 octane motor fuel. Philadelphia, Baltimore, Boston, Providence, Rochester and Buffalo have all been reasonably firm in the tankcar and tank-wagon market, although hardly any of the points have escaped occasional outbreaks of price cutting in the ranks of service station dealers.

Disturbed retail gasoline prices continued last week in northern New Jersey and in practically all boroughs of metropolitan New York. The price disturbances, however, continued on their previous basis of scattered warfare and had not been sufficiently concentrated to bring about a general reduction. Marketers, nevertheless, are somewhat skeptical about what will happen to the gasoline price after Labor Day, particularly in view of the fact that the supply of "distress" motor fuel appears to be increasing in the spots of least resistance and this tendency is expected to grow more emphatic as operation of cars subsides to winter rates.

Abetting the retail price disturbances in the northeast is the downward trend of tanker rates and the probability that at least several weeks will elapse before this condition can be expected to reverse. Clean boats are reported available for 33 cents per barrel or less from the Gulf Coast to north Atlantic ports, compared to a charter rate of 38 to 39 cents two weeks ago and an early spring peak of 60 cents. Dirty boats are offered by owners at 35 cents currently against 41 and 42 cents early in August. Although open market trading in fuel oil during September and October may strengthen the charter rate for dirty bottoms, the clean tonnage may not respond accordingly.

Part of the weakness in the rate for clean tonnage is traceable to the freeing of several boats held under contract during the summer motoring season by major refiners whose own fleets were inadequate to meet demand. Emergencies may arise during the early fall and winter to force large refiners into the open charter market for additional dirty tonnage, but at least a part of the fuel oil requirements have been anticipated and in several instances large stocks have been moved in the past two months from the Gulf Coast to north Atlantic storage.

Tactics adopted by some groups in Pittsburgh, Detroit and other inland marketing centers in efforts to force retail dealers to post "normal" prices have not been adopted in this district. However, a group of dealers in Brooklyn was reported at the end of last week offering 6 gallons of "house brand" gasoline for 93 cents, including taxes, and another group of garages in the Bronx was said to be displaying signs quoting 90 cents for 6 gallons of branded motor fuel.

Kerosene, light fuel and residual fuel oils remained unchanged last week in the north Atlantic district. Kerosene is moving at a reasonably active rate for this season at 6.3 cents per gallon in tankcars. Bunker C fuel oil is still quoted at $1.35 per barrel, but reports were heard that cargo quantities might be obtained from one or two sources in this district at $1.30 per barrel. There remains a considerable element in the industry here holding to the belief that heavy fuels will be scarce before the winter is over and contend that the current weakness in this grade of oil is the result of uneasiness on the part of a few refiners in the Gulf Coast district who are cramped for storage facilities.

In other directions, however, the Gulf Coast market is remaining strictly firm. A full cargo of No. 2 fuel oil was reported loaded on the Gulf Coast last week for export shipment and the price was said to be 4¼ cents per gallon. A smaller amount, about 30,000 bbls., of gas oil for early September loading was sold on the Gulf Coast last week at 4¼ cents for an export account. The prices involved on both export sales are in line with those quoted over the past several weeks although sales have been somewhat infrequent for about a month. Indications that the trade anticipates higher light fuel oil prices is given in reports from the Gulf Coast that several refiners are quoting 4⅜ to 4½ cents per gallon for No. 2 fuel for October delivery.

In the New York district, No. 2 fuel oil is reported unavailable at less than 5⅛ to 5¼ cents per gallon with a limited amount of material offered in the open market at any price. The rate at which winter delivery commitments have been reaching the contract departments has given most companies added inducement to hold their light fuel oil stocks. Traders in position to supply limited amounts of light fuel to the open market are also holding off to stretch their margin, if the anticipated increase develops in the early fall.

Normal movement in export channels coupled with improvement in shipping instructions from jobbers have combined to bolster the lubricating oil market in western Pennsylvania. Refiners are not being pressed currently to meet the demand, but movement is sufficient to keep distress material from crowding quotations lower.

Kerosene continued the most active product in the inland Pennsylvania area last week and practically all refiners were quoting 5 cents per gallon or slightly higher for the

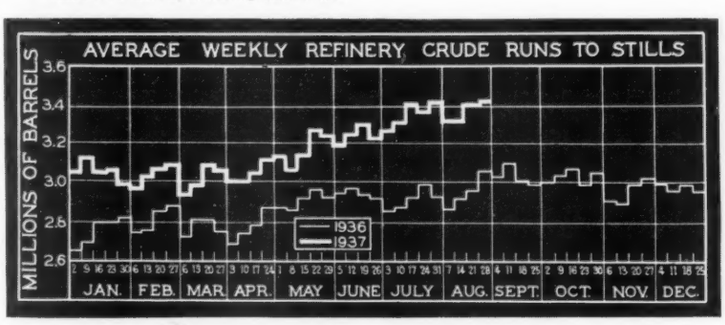
(Continued on Page 104)

A. P. I. Weekly Refinery Statistics

Week Ending August 28, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	569,000	18,890,000	13,439,000
Applachain	88.4	105,000	2,568,000	890,000
Indiana, Illinois, Kentucky	92.4	448,000	11,027,000	6,893,000
Oklahoma, Kansas, Missouri	84.7	330,000	6,354,000	3,504,000
Inland Texas	56.6	151,000	1,713,000	1,768,000
Texas Gulf	95.5	744,000	7,249,000	10,023,000
Louisiana Gulf	96.6	138,000	1,841,000	2,735,000
North Louisiana and Arkansas	63.7	44,000	447,000	381,000
Rocky Mountains	69.7	56,000	1,393,000	791,000
California	90.9	538,000	11,895,000	68,477,000
Total reported	88.9	3,123,000	63,377,000	108,901,000
Estimated unreported	.....	302,000	3,620,000	3,210,000
*Estimated total	.....	3,425,000	66,997,000	112,111,000
*Estimated total previous week	.....	3,415,000	67,260,000	110,493,000
*August 29, 1936	.....	2,975,000	61,071,000	110,628,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending August 14, 1937	308,737,000 barrels
Week ending August 7, 1937	307,922,000 barrels
Week ending August 15, 1936	304,148,000 barrels

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of August 31, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Chicago, Ill.	15.5	13.5	4.0	10.1
Decatur	15.5	14.0	4.0	10.1
Joliet	15.5	14.0	4.0	10.1
Peoria	15.5	14.0	4.0	10.1
Quincy	15.3	13.8	4.0	9.9
Davenport, Ia.	15.5	14.0	4.0	‡13.1
Des Moines	15.3	13.8	4.0	‡12 9
Mason City	15.7	14.2	4.0	‡13.3
Sioux City	15.5	14.0	4.0	‡13.1
Duluth, Minn.	17.3	15.8	5.0	10.9
Mankato	16.9	15.4	5.0	10.5
Twin Cities	16.9	15.4	5.0	10.5
Lacrosse, Wis.	16.9	15.4	5.0	10.5
Green Bay	17.2	15.7	5.0	10.8
Milwaukee	16.8	15.3	5.0	10.4
Detroit, Mich.	15.4	13.9	4.0	9.8
Grand Rapids	16.5	15.0	4.0	10 9
Saginaw	16.3	14.8	4.0	8.5
Evansville, Ind.	17.0	15.5	5.0	†10.6
Indianapolis	17.2	15.7	5.0	†9.6
South Bend	17.4	15.9	5.0	†9.6
Fargo, N. Dak.	16.9	15.4	4.0	11.5
Minot	18.1	16.6	4.0	12.7
Huron, S. Dak.	17.3	15.8	5.0	10.9
Kans. City, Mo.*	14.9	13.4	4.0	8.0
St. Louis*	15 2	13.7	4.0	9 8
St. Joseph*	14 9	12.4	4 0	8 5
Wichita, Kans.	14.4	12.9	4.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Atl'tic City, N. J.	13.5	12.0	4.0	9.0
Newark	13.5	12 0	4.0	9.0
Annapolis, Md.	15 6	14.1	5.0	9.5
Baltimore	15 0	13 5	5.0	9.0
Cumberland	17.4	14.9	5.0	10.0
Wash'g'n, D. C.*	12 5	11.0	3.0	9.5
Danville, Va.	18.2	15.7	6.0	12.9
Norfolk	17 0	14.5	6.0	11.5
Petersburg	17.3	14.8	6.0	11 7
Richmond	17 3	14.8	6.0	11 7
Roanoke	18.5	16.0	6.0	12.9
Charles'n, W. V.	17.8	15.3	6.0	12.6
Parkersburg	17.1	14 6	6.0	11.2
Wheeling	17.0	15 5	6 0	12 2
Charlotte, N. C.	19.4	16 9	7.0	12.6
Hickory	19 9	17.4	7.0	13 0
Mt. Airy	19.7	17.2	7.0	12.8
Raleigh	19.0	16.5	7.0	12.1
Salisbury	19.5	17.0	7.0	12.7
Charleston, S. C.	18.0	15.5	7.0	11.1
Columbia	19.0	16.5	7.0	12.1
Spartanburg	19.7	17.2	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington and Baltimore where station prices of 16.0 and 18.5 cents, respectively, are in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5-cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Net dlr.	Inc. tax	tank-wag.
Atlanta, Ga.	22.0	19 0	7.0	*13.0
Augusta	21.0	18.0	7.0	*14.0
Macon	21.5	18.5	7.0	*14.5
Savannah	19.0	16.0	7.0	*12.0
Birm'ham, Ala.	19.5	16 5	8.0	12.0
Mobile	22.0	19.0	9.0	11.0
Montgomery	22.0	19.0	9.0	14.5
Jackson, Miss.	21.0	18.0	7.0	*13.0
Vicksburg	20.5	17.5	7.0	*13.0
Jacksonville, Fla.	20.5	17.5	8.0	11.0
Miami	20.5	17.5	8.0	†11.5
Pensacola	22 0	19.0	9.0	12.0
Tampa	19.0	16.0	8.0	10.5
Lexington, Ky.	20.0	17.0	6.0	11.0
Covington	19.5	16.5	6.0	11.0
Louisville	20.0	17.0	6.0	10.5
Paducah	20.0	17.0	6.0	8.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Denver, Colo.	17.5	5.0	11.5
Grand Junction	20 0	5.0	15.0
Pueblo	16.0	5.0	10.5
Casper, Wyo.	18.0	5.0	11.5
Cheyenne	18.0	5.0	13.0
Butte, Mont.	19.5	6 0	15.5
Billings	21.0	6.0	15.5
Helena	21.5	6.0	15.5
Great Falls	21.5	6.0	15.5
Salt Lake, Utah	19.5	5.0	16.0
Twin Falls, Ida.	21.5	6.0	18.0
Boise	21.5	6.0	18.0
Albuquerque, N. M.	17.5	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag. con'r.	Divided dlr.	Inc. tax	tank-wag.
Ohio points	17.0	16.0	5.0	*13.5

*Includes state tax of 1 cent.

Discounts to commercial consumers, contract: Effective Aug. 12, 1937, for Ohio state-wide, 20,000 gallons or over per month, 1 cent per gallon off commercial consumer tank-wagon price. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons gets service-station price. Price to undivided dealers is same as to commercial consumers.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Omaha	17 9	16.4	6.0	10.4
McCook	18 0	17.1	6.0	10.0
Norfolk	18 3	16 8	6 0	10 8
North Platte	18.7	17 2	6.0	11.2
Scotts Bluff	19 4	15.9	6 0	11.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17 5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	9.0
Fresno, Calif.	18.5	19.5	4.0	12.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	20.0	21.0	5.0	13.0
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	13.5
Spokane	23.0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.6	13.5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Albany, N. Y.	15.0	13.5	5.0	9.0
*Met. N. Y.:				
Manh't'n, Br'nx	15.0	13.5	5.0	9.0
Staten Island	15.0	13.5	5.0	9.0
Q'ns & Brklyn	15 0	13 5	5 0	9.0
Buffalo	15.8	14.04	5.0	8.5
Rochester	15.3	13.92	5 0	8.5
Syracuse	15.5	14.1	5.0	9.0
Boston, Mass.	12.5	13.5	5.0	8.5
Portland, Me.	15.8	13.5	5.0	8.75
Manch'ter, N. H.	16 3	14.0	5.0	9.5
Burlington, Vt.	15.9	13.9	5.0	9.5

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Muskogee, Ok.	15.0	5.0	7.0
Oklahoma City	14.0	5.0	8.0
Tulsa	14.0	5.0	7.0
Ft. Smith, Ark.	15.5	5.0	10.0
Little Rock	18 0	7.5	9.5
Texarkana	15.5	5.0	8.5

Texas

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	14.0	18.0	5.0	8.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.5	18.5	5.0	8.0
San Antonio	14.5	18.5	5.0	8.0

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
N. Orleans, La.	20.5	18.0	*10.0	†13.0
Baton Rouge	18.5	16.0	8.0	12.0
Alexandria	19.0	16.5	8.0	12.0
Lafayette	19.5	17.0	8.0	13.0
Lake Charles	19.5	17.0	8.0	12.5
Shreveport	18.0	15.5	8.0	9.5
Knoxville, Tenn.	21.5	19.0	8.0	14 0
Memphis	19.5	17.0	8.0	12.0
Chattanooga	21.0	18.5	8.0	13.5
Nashville	20.5	18.0	8.0	11.0
Bristol	20.25	19.0	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 24 and 22 cents per gallon, respectively.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Philadelphia, Pa.	14.5	13.0	5.0	10.5
Pittsburgh	15.5	13.5	5.0	11.0
Allentown	15.0	13.5	5.0	11.0
Erie	14.5	13.0	5.0	10.0
Scranton	15.0	13.5	5.0	11.0
Altoona	15.5	13.5	5.0	11.0
Dover, Del.	14.5	....	5.0	11.0
Wilmington	14.5	....	5.0	11.0
Springf'd, Mass.	14.3	....	4.0	9.0
Worcester	14.8	....	4.0	9.0
Hartford, Conn.	14.6	....	4.0	9.0
New Haven	14.0	....	4.0	9.0
Providence, R. I.	14.0	....	4.0	8.5

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N.S.	24.0	8.0	18.5
St. John, N.B.	24.0	8.0	18.5
Montreal, Que.	21.0	6.0	17.5
Toronto, Ont.	22 0	6.0	17.0
Hamilton, Ont.	22.0	6.0	17.0
Winnipeg, Man.	28 2	7.0	20.7
Brandon, Man.	29 8	7.0	22.3
Regina, Sask.	29.5	7.0	22.0
Saskatoon, Sask.	32 3	7.0	24.8
Edmonton, Alta.	30.5	7.0	24.2
Calgary, Alta.	28 0	7.0	21.5
Vancouver, B.C.	23 0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Standard Oil Co. (Indiana) August 13 reduced dealer gasoline 1 cent in St. Joseph.

Continental Oil Co. August 18 reduced dealer gasoline 1.5 cents in Pueblo and advanced dealer gasoline 1 cent in Billings.

Atlantic Refining Co. August 6 reduced dealer gasoline .5 cent in Springfield; July 24 reduced dealer gasoline .5 cent in Wilmington.

New York Market

(Continued from Page 103)

45 w.w. grade. The demand for this material was also improved on the Gulf Coast where a part cargo of 44 w.w. for export loading brought 5⅜ cents per gallon. Kerosene of export quality is said to be scarce on the Gulf Coast and most of the producers are convinced that their own requirements will absorb the stocks accumulated during the slack burning season.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of August 31, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)		.05
63-67 octane	.05¼	.05½
68-70 octane (regular)		.06
60-62 400 grades:		
62 oct. and below (3d gr.)		.05
63-67 octane	.05¼	.05½
68-70 octane (regular)		.06
64-66 375	.05¼	.05¼
68-70 360	.05¼	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below		.05
63-70 octane	.05¼	.05½
68-70 octane (regular)		.06
60-62 400		.05
64-66 375	.05¼	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below		.05½
63-67 octane	.05¾	.06
68-70 octane (regular)		.06½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below		.05½
63-67 octane	.06	.06⅛
68-70 octane (regular)		.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05⅛
63-67 octane	.05⅝	.05½
68-70 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.05	.05⅛
63-67 octane	.05⅜	.05½
68-70 octane (regular)	.06	.06⅛
64-66 375	.05	.05¼
68-70 360	.05⅛	.05⅝

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.06	.06¼
60-64.9 octane	.07⅜	.07⅝
65-70 octane	.07½	.07¾
64-66 375	.06¼	.06⅝
68-70 350	.06⅝	.06½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½	.08½
58-60 400, 65 oct. and higher	.08¼	.09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.07½
Baltimore		.07¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)	.07½	.07¾
Philadelphia	.07½	.07¾
Boston		.07¾
Baltimore	.07½	.07¾
Charleston, S. C.		.07¾
U. S. Motor, 65 and above:		
*New York (Bayonne)	.08	.08½
Philadelphia	.07¾	.08¼
Boston	.08	.08½
Baltimore		.08
Charleston, S. C.		.08

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane		.06¼
60-64.9		.06⅝
65 octane and higher		.06½

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05¾	.06
52-54 450 (blending)	.05¾	.06
54-56 450 (blending)	.05⅞	.06⅛

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04
Grade 18-55	.04¾	.04⅞

NORTH TEXAS—

Grade 26-70		.04⅛
Grade 18-55	.04⅞	.05

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04	.04⅛

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110 flash, 540-550 e.p.	.04	.04¼
41-43 gr., 300-350 l.b.p., 110-125 flash, 500-520 e.p.	.04⅝	.04⅝
46-48 gr., 210-230 l.b.p., 480 max. e.p.	.04¾	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04	.04¼
42-44	.04¼	.04½

NORTH TEXAS—

41-43	.04	.04¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43		.04⅝

ARKANSAS (Ark., N. La., Miss. del.)—

41-43		.04¾

PENNSYLVANIA (inland refineries)—

45	.05	.05¼
46	.05⅛	.05⅜
47	.05¼	.05½

CHICAGO (Based on Group 3)—

41-43	.04	.04¼
42-44	.04¼	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.06

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.05¾

***GULF COAST (domestic)—**

41-43		.05

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03¼	.03½
No. 3 zero to 15, 28-32	.03⅛	.03⅜
No. 3, 15 and above, 28-32	.02⅝	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03½	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03⅝

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.03⅞	.04
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03¼	.03⅜
No. 3, zero to 15, 28-32	.03⅛	.03¼
No. 3, 15 and above, 28-32	.02⅝	.02¾

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¾
*No. 2	.05⅝	.05⅝
*No. 4	.05⅛	.05⅝

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.03	.03¼
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH TEXAS—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (inland refineries)—

36-40	.04⅜	.04½

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.25	1.40
24 plus diesel, per bbl.	1.15	1.40
24 plus diesel (bunkers)	1.55	1.65
12-16 (bunkers at tidewater)	1.05	1.20
10-16 (cargo lots)	.90	1.15
12-17 (tankcars)	1.00	1.15
10-17 (high sulfur)	.55	.95
San Joaquin Valley:		
10-18 (tankcars)	.75	1.00
24 plus diesel, per bbl.	1.30	1.50
San Francisco:		
27 plus diesel		1.50
24 plus diesel (bunkers)		1.70
10-16 (bunkers)		1.20

GULF COAST—

28-30 gas oil	.04⅛	.04¼
28-30 diesel (bunkers)		1.90
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		1.05

NEW YORK (Bayonne N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¼c per bbl.)		2.20
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)	1.35	1.50
Industrial fuel (tankcars)		.04½

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.22
150-160 D, 0-10		.19
150-160 D, 15-25		.18½
150-160 E, 15-25		.18
100-110 D, 0-10		.17
Steam refined:		
631 green (treated)		.16
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 145-50 at 210, 545-550 flash):		
10 pour test	.24	.24½
15 pour test	.23	.23½
20 pour test	.22	.22½
25 pour test	.21	.21½
Steam refined:		
600	.14	.14½
650	.16½	.17
600 Pennsylvania flash	.17½	.18
630 flash	.21½	.22
600 Warren E filtered	.17½	.18

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-3½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 Cold Test:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08⅝
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¾	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale Oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11¼
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.22½	.23
10 pour test	.21½	.22
15 pour test	.21	.21½
25 pour test	.20	.20½
180 vis. at 70° F., 3 color:		
25 pour test	.23	.23½
200 vis. at 70° F., 3 color:		
Zero pour test	.27	.27½
10 pour test	.26	.26½
15 pour test	.25½	.26
25 pour test	.24½	.25

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.03

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0295	.0300
124-126 (a.m.p.) w.c. scale	.0300	.0305

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0295	.0300
124-126 (a.m.p.) y.s.	.0265	.0280
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.06½
60-62 400	.06	.06½
61-63 390	.06⅛	.06¼
64-66 375		.06⅜

LOS ANGELES—

U. S. Motor grades:		
55-65 octane		.04¾
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05¾	.06¼

KEROSENE

GULF COAST—

41-43 prime white		.04⅞
41-43 water white		.05
44 water white		.05⅛

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.26½	.27
600 S.R. unfiltered	.24	.24½
630 S.R. unfiltered	.25½	.26
600 flash, S.R.	.26½	.27
630 flash, S.R.	.31½	.32
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution	.31½	.32

NEUTRAL OIL

200-3 color	.34	.34½
150-3 color	.29½	.30

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0295	.0300
124-126 y.s.	.0265	.0280

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas (May 22, 1937)*	$1.35
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Corp., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1.18
Iles, Colo., heavy*	1.12
Greybull, Wyo.*	1.30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light.*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1.33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.23
Rock Creek, Wyo.†	1.20½
Lea County, N. M. (see West Texas gravity table).	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La.	See note below
Clay Creek, Tex.	$1.00
Garden Island, La.	1.37
Cleveland, Tex.	1.27
Hardin, Tex.	1.15
Lafitte, La.	1.24
Livingston, Tex.	1.27
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Middle Western States

OHIO OIL CO.

(Effective January 28, 1937)

Lima	$1.25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich. (July 23, 1937)*	1.27
West Branch, Mich. (July 22, 1937)	1.09
Buckeye (July 23, 1937)	1.24½
Arenac, Mich. (July 1, 1937)	1.21
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1.42
Kentucky River	1.50
Western Kentucky	1.40

*Posted by Pure Oil Co.

Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1.09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.

(Effective June 7, 1937)

Bradford, Pa.	$2.82
Allegany, N. Y.	2.82

SOUTH PENN OIL CO.

(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.57
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.52
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.37
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Jan. 29, 1937)	1 42

PENNZOIL CO.

(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.82
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.81
Includes Tidioute district.	
Group C	2.80
Includes Turkey and Tidioute districts.	
Group D	2.79
Includes Bear Creek and Porkey districts.	
Group E	2.76
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts	
Price depends on lengths of pipe line haul to plant at Oil City.	

PURE OIL CO.

(Effective June 7, 1937)

Cabin Creek, W. Va.	2.52
Bradford Hollow, W. Va.	2.52
Kelly Creek, W. Va.	2.52

Canada

Ontario (Sept. 9, 1933)*	
Petrolia	$2.10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2.60
Discolored naphtha, 65 gravity and higher	2.36
Discolored naphtha and crude oil, 40-40.9 gravity	1.55
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.27

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.24

*In U. S. currency, f.o.b. ship, based on April spot market transactions.

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Deep, Satsuma	Gulf Coast	Gulf Coast	Lea County, N. Mex. West Texas except Pecos County,	Mirando district, Texas	Marion County, Texas	Refugio, Greta, Saxet, Taft, Texas	Anahuac, Flour Bluff, Dickson, Turtle Bay	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	$.90	....
18-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	.92	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	....	$.94	.94	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.96	....	$1.01	....	.96	.96	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.98	....	1.03	....	.98	.98	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	1.00	....	1.05	....	1.01	1.01	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	1.02	....	1.07	....	1.04	1.04	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.04	....	1.09	....	1.07	1.07	....
Bel. 25	....	$.98	....	....	$.90	....	....	$.93	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1.00	....	....	.92	....	....	.95	....	1.10	1.10	$.78	1.06	.92	1.11	....	1.10	1.10	.90
26-26.9	....	1.02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	1.13	....	1.13	1.13	.92
27-27.9	....	1.04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	1.15	....	1.15	1.15	.94
28-28.9	....	1.06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	1.17	....	1.17	1.17	.96
Bel. 29	$1.06	....	$.96	$1.03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1.08	1.08	.98	1.05	1.00	....	....	1.03	1.22	1.19	1.19	.86	1.14	1.00	1.19	....	1.19	1.19	.98
30-30.9	1.10	1.10	1.00	1.07	1.02	....	....	1.05	1.24	1.21	1.21	.88	1.16	1.02	1.21	$1.16	1.21	1.21	1.00
31-31.9	1.12	1.12	1.02	1.09	1.04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	1.23	1.18	1.23	1.23	1.02
32-32.9	1.14	1.14	1.04	1.11	1.06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	1.25	1.20	1.25	1.25	1.04
33-33.9	1.16	1.16	1.06	1.13	1.08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	1.27	1.22	1.27	1.27	1.06
34-34.9	1.18	1.18	1.08	1.15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	1.29	1.24	1.29	1.29	1.08
Bel. 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.20	1.20	1.10	1.17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	1.31	1.26	1.29	1.29	....
36-36.9	1.22	1.22	1.12	1.19	1.14	1.00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	1.33	1.28	1.29	1.29	....
37-37.9	1.24	1.24	1.14	1.21	1.16	1.02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	1.35	1.30	1.29	1.29	....
38-38.9	1.26	1.26	1.16	1.23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	1.37	1.32	1.29	1.29	....
39-39.9	1.28	1.28	1.18	1.25	1.20	1.06	1.01	1.23	1.42	....	1.39	1.06	1.34	1.20	1.39	1.34	1.29	1.29	....
40,over	1.30	1.30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	1.41	1.36	1.29	1.29	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.
Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.
Column 3—All purchasers.
Column 4—Humble Oil & Refining Co. and Sinclair Oil Purchasing Co.
Columns 5, 6, 7 and 8—All purchasers.
Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)
Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)
Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.
Column 12—All purchasers.
Column 13—All purchasers (effective July 6, 1937).
Column 14—Magnolia Petroleum Co.
Column 15—Humble Oil & Refining Co. (effective July 6, 1937).
Column 16—Humble Oil & Refining Co. prices start at 30-30.9 gravity at $1.16 adding 2 cents for each degree upward to and including 40 and over at $1.36.
Columns 17 and 18—Shell Petroleum Corp.
Column 19—Tide Water Oil Co.

Rocky Mountain Runs

Daily average production estimates for week ended August 28:

	Bbls.
WYOMING	
Salt Creek	15,960
Big Muddy	1,390
Badger Basin	140
Black Mountain	180
Byron	100
Dallas Derby	550
Dutton Creek	60
Elk Basin	70
Frannie	840
Garland	1,900
Grass Creek	2,690
Hamilton dome	1,800
Hidden dome	360
Hudson	310
LaBarge	800
Lance Creek	11,350
Lost Soldier	1,420
Medicine Bow	4,380
Mule Creek	200
Midway	20
Oregon Basin	6,660
Osage	740
Pilot Butte	20
Quealy dome	810
Rock River	2,450
South Casper	470
Poison Spider	320
Teapot	10
Wertz	130
Waugh dome	260
Total Wyoming	55,790
MONTANA	
Border	90
Cat Creek	620
Cut Bank	10,600
Kevin-Sunburst	5,070
Lake Basin	20
Pendera	1,850
Total Montana	18,250
COLORADO	
Florence	140
Fort Collins and Wellington	250
Iles	3,080
Moffat	390
Orchard	20
Rangely	80
Tow Creek	160
Price	610
Total Colorado	4,730
NEW MEXICO	
Cooper	6,360
Eaves	1,150
Eunice	31,940
Hardy	1,380
Hobbs	19,040
Jal	1,320
Langlie	2,150
Lynch	790
Lynn	330
Mattix	1,880
Monument	33,080
North Lynch	60
Penrose	3,240
Rhoades	90
Skelly	1,480
South Eunice	2,030
Vacuum	20
Artesia-Maljamar	6,310
Getty	200
Hogback	200
Rattlesnake	730
Table Mesa	100
Total New Mexico	113,880
Total Rocky Mountain region	192,650

Saskatchewan Drilling

In the Vera district near Unity, Saskatchewan, Franco Oils No. 1 Vera is at 1,740 feet and preparing to run 6-inch casing after encountering a gas flow estimated around 1,000,000 feet a day. Vera Oilfields No. 1 in the same area, drilled some years ago, encountered about 2,000,000 feet of gas at the Devonian contact at 2,140 feet.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ending Aug. 28 Sales	Week ending Aug. 28 High	Week ending Aug. 28 Low	Week ending Aug. 28 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	80	1,700	93	90½	90⅝	Amerada Corp.	788,675	N.P.	50cQ	7-31-37	$2.00	125½	75	80	48½
37	26⅞	11,700	28½	26⅞	27	Atlantic Refining	2,664,000	$25	25cQ	9-15-37	1.25	35⅛	26⅝	28	20½
43⅝	27⅝	1,600	30½	28	28	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11¾
35¼	23	6,700	25	22⅛	23	Barnsdall Oil Co.	2,247,974	$5	25cQ	8-2-37	.80	28¼	14⅛	14¾	5⅞
20⅞	10	26,000	12⅝	11½	11⅝	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-37	.40	23⅜	14	15¾	3⅜
17⅞	14½	29,500	15⅛	14½	14½	Consolidated Oil Corp.	13,919,417	N.P.	20cQ	8-14-37	.80	17¼	11½	12¼	6½
49	39¾	11,500	45¼	42⅛	42⅞	Continental Oil of Delaware	4,682,615	$5	50cQ†	9-30-37	1.50	44⅞	28⅛	35	15⅛
17⅝	12½	6,500	14⅞	13⅞	14⅛	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	13⅞	6⅜	7	1½
35⅜	25⅛	5,400	31⅜	28	28⅛	Mid-Continent Petroleum	1,855,912	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9½
34	23⅞	1,200	27	26¼	26¼	Mission Corporation	1,399,345	N.P.	1.00	6-15-37	.45	29⅞	16¾	17¾	10⅜
41⅜	31¾	5,400	35	32⅛	33	National Supply of Delaware	382,591	$25	....	5-15-31	....	75½	19⅞	20⅞	9
22⅞	17⅛	11,200	18¾	18	18	Ohio Oil Co.	6,563,377	N.P.	50cSA	6-15-37	.60	18	12⅛	14¼	9¼
29¾	20¾	1,700	24½	23½	23½	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11¾	14	6¾
4½	2	800	2	2	2	Panhandle P. & R.	198,770	N.P.	....	..	....	4¼	1⅜	1⅞	½
64	49½	15,300	59⅛	56⅜	57⅞	Phillips Petroleum	4,449,052	N.P.	75cQ†	9-1-37	2.50	52⅜	38⅛	40	13¾
29⅞	24¼	1,700	25½	24½	24⅞	Plymouth Oil Co.	1,050,000	$5	35cQ	9-30-37	.90	27¾	11⅞	13	6½
24⅜	16⅝	50,400	20¼	18½	19⅛	Pure Oil Co.	3,281,120	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	36	1,500	38¼	36	38	Seaboard Oil of Delaware	1,224,283	N.P.	25cQ	9-15-37	1.00	44	30½	36⅞	20¾
34¾	24½	16,800	26⅛	24½	24⅞	Shell Union Oil	13,070,625	N.P.	50c	7-15-37	.25	28¼	14¾	16½	5½
105⅝	102	700	104¾	104¼	104¾	Shell Union Oil 5½% pfd.	343,500	$100	$1.37½Q	10-1-37	28.87½	127½	102	111	63⅛
4¼	3⅛	300	3⅜	3¼	3¼	Simms Petroleum	461,698	$10	50c liq.	8-3-37	2.25 liq.	6¾	3½	18¾	4¾
60⅝	42	1,900	52	49⅛	49⅛	Skelly Oil	1,006,348	$15	50c	9-30-37	....	47⅜	19½	20½	6½
23¼	16¼	78,800	21¾	19⅞	20⅛	Socony-Vacuum	31,151,071	$15	25cSA	9-15-37	.70	17½	12½	15¾	10⅝
50	39⅝	7,600	44¼	41	41¾	Standard Oil of California	13,014,754	N.P.	45cQ†	9-15-37	1.20	47⅝	35	41⅛	27¾
50	40½	6,900	46⅛	44½	44½	Standard Oil (Indiana)	15,196,241	$25	50cQ†	9-15-37	2.40	48½	32¾	33⅜	23
36½	30⅝	200	35	35	35	Standard Oil of Kansas	134,841	$10	$1	12-26-36	1.00	31	25	32	20
76	63⅛	17,600	67¾	63¼	63⅞	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	6-15-37	2.00	70⅜	51⅛	52⅜	35¾
77½	65	600	68⅛	67	67	Sun Oil	2,156,825	N.P.	25cQ	9-15-37	$1 & 6% Sk.	91	70	77	60½
65⅛	50⅜	28,600	61¾	58⅝	58⅝	Texas Corp.	10,896,858	$25	50cQ	10-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	6	4,300	7	6⅝	6⅝	Texas Gulf Producing Co.	888,129	N.P.	5c	12-15-36	.05	8⅞	4⅝	4¾	2½
16⅝	11¾	5,900	13⅛	12⅜	12⅜	Texas Pacific Coal & Oil	888,237	$10	10c	9-1-37	.25	15¼	7½	9¼	3¼
21⅝	15⅜	13,800	20⅜	19	19⅛	Tide Water Associated	6,288,512	N.P.	35cQ†	9-1-37	.70	21¾	14¾	15⅞	7⅝
28¼	22⅞	4,200	24⅞	23⅝	23⅝	Union Oil of California	4,386,070	$25	30cQ	8-10-37	1.00	28½	20¾	24	14¾
31½	24¾	300	27¾	27	27	Union Tank Car Co.	1,200,000	N.P.	40cQ	9-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	4	1,400	4⅛	4	4	Wilcox Oil & Gas	424,839	$5	...	5-10-28	....	5¼	2¾	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ending Aug. 28 Sales	Week ending Aug. 28 High	Week ending Aug. 28 Low	Week ending Aug. 28 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	16	1,400	18	17½	17½	Bridgeport Machine Co.	260,000	N.P.	25c	6-30-37	$1.00	21	13¼	14⅛	3¾
51½	45¾	250	49	48	48	Buckeye Pipe Line Co.	200,000	$50	$1Q	9-15-37	3.25	50	39¾	42½	30½
2¾	1⅝	2,200	1¾	1½	1½	Carib Syndicate	799,020	25c	....	....	....	4⅞	1⅞	4¼	1⅝
123	110¼	100	115	115	115	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	9-30-37	7.00	124¾	105	157	115
5⅜	2⅝	27,900	3⅛	2¾	2¾	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅜	3	3¼	⅜
5½	4	13,900	4⅞	4	4	Cosden Petroleum	399,687	$1	....	....	....	4½	1½	1½	¼
38¾	28½	4,500	37	34⅝	34⅝	Creole Petroleum	6,974,356	$5	50cSA†	6-10-37	.50	39	19⅞	23¾	10
18⅝	11½	500	11¾	11½	11½	Darby Petroleum	351,390	$5	25cSA	7-15-37	.50	18⅛	9	8⅞	4
8⅜	5¼	2,800	7¾	7	7	Derby Oil & Refining	263,162	N.P.	....	....	....	6¾	1⅞	2	⅜
47½	30	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	8-2-37	4.00	47½	38½	38	33¼
63½	50	5,100	56½	55	55⅝	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	72	3,900	82½	80⅝	80⅝	Humble Oil & Refining	8,923,935	N.P.	62½cQ	10-1-37	1.50	80	57	64	44
24¼	20	2,100	21	20⅝	21	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-37	1.25	24½	19¾	22½	15⅝
15	7¾	800	9	8	8¼	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	33½	4,600	35¼	34	35¼	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-37	2.50	39⅝	32⅝	39¾	28
15¼	11⅜	1,400	13	12½	12½	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	9-15-37	.50	15⅜	9⅞	11⅜	4⅜
34	16⅛	6,000	27	24¼	24¼	Lion Oil Refining	270,000	N.P.	50cQ†	7-20-37	.75	17¾	7⅜	8⅛	3½
14¼	9⅞	1,700	10⅝	10¼	10¼	Lone Star Gas	5,382,723	N.P.	20c	8-21-37	.60	14¼	9⅞	10⅞	4½
14⅝	8¾	2,300	9½	8¾	9	Midwest Oil Co.	998,444	$10	50c	6-15-37	....	..	..	..	..
7⅞	5¾	3,300	6⅛	6	6	Mountain Producers	1,682,182	$10	30cSA	6-15-37	.60	8⅜	5	5¾	4⅛
19½	14½	700	15⅛	15	15⅛	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-37	1.00	23	17⅜	20	11¾
12½	10	600	10½	10	10	National Transit	509,000	$12.50	45cSA	6-15-37	.75	15¾	9¼	10⅝	6¾
6⅛	4¾	No sales	..	..	..	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	2¼	No sales	..	..	..	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4⅜	200	4¼	4¼	4¼	New York Transit	100,000	$5	15cSA	4-15-37	.35	6¼	4¼	4⅞	3
12¾	7½	500	9	8½	9	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5½	14,000	7⅝	6¾	6⅞	Pantepec Oil	1,608,700	N.P.	....	....	....	10⅛	3¼	4⅜	1¼
13¾	5	1,000	6⅛	5¼	5¼	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	4	200	5	5	5	Ryan Consolidated	296,931	N.P.	....	....	....	4¾	1⅞	2½	⅝
56	42	1,000	52½	50	50	South Penn Oil	1,000,000	$25	75cQ†	6-30-37	2.60	44	32½	34½	21⅝
7¼	5	No sales	..	..	..	Southern Pipe Line	100,000	$10	25cSA	9-1-37	.25	7⅞	3¼	5	3⅞
42	27	No sales	..	..	..	South West Penna. Pipe Lines	35,000	$50	50cQ	7-1-37	13.00	60	44	56	44¼
21⅛	19	2,400	20⅞	20¼	20¼	Standard Oil of Kentucky	2,604,790	$10	40cQ†	9-15-37	1.35	23⅜	17⅛	24	18
13¾	9⅞	300	9⅝	9⅝	9⅝	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7¾
45	33	300	36¼	36	36	Standard Oil of Ohio	753,740	$25	25cQ	9-15-37	2.00	40	21¾	23⅝	11½
4⅞	3¾	7,400	4½	4	4⅛	Sunray Oil	1,910,119	$1	10c	8-20-37	.10	5	2⅝	2⅞	⅞
7⅝	5	1,300	5⅝	5½	5½	Texon Oil & Land	336,028	$2	15cQ	9-3-37	.60	9¾	5⅝	6⅞	5

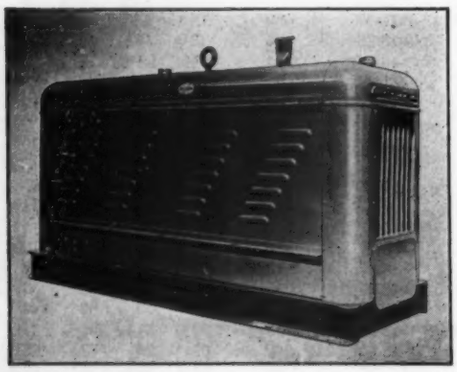
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Welding Machine Designed for Pipe-Line Use Exclusively

An electric welding machine designed exclusively for pipe line work has been announced by the Wilson Welder & Metals Co., Inc., 60 East Forty-second Street, New York. It is obtainable in 300- and 400-amperage capacities. It is distinguished



by its color and the name "Yellow Jacket." It is constructed with a ruggedness beyond that needed in less rigorous work, according to the manufacturers. Weather contingencies and circumstances of field operations have been studied and various problems encountered have been taken into consideration in its design.

Features which contribute to the machine's dependability under extreme conditions include double sediment collectors for carburetor supply, improved foolproof idling device, large 36-gallon gasoline tank and improved current switch. Vibration is diminished by a special close-coupling device. Other features are a lowered center of gravity of 1 foot, light-weight reinforced base and framework, center lifting bail, radiator protecting grill.

The distributor and other parts are eastily accessible and for operating purposes two hinged panels are placed on one side, permitting instant and easy access to all controls. Either battery or magneto ignition is provided.

Bulletins, Booklets and Other Literature for the Trade

J. H. Williams & Co., 75 Spring St., New York, have issued a catalog describing their drop-forged wrenches and other standard stock specialties. Included are additions to their carbon and alloy wrenches, detachable "Supersocket" wrenches and "Agrippa" tool-holders.

Two new catalogs are offered by the American Hoist & Derrick Co., St. Paul, Minn. One, SNP-1, covers snowplows and wings. The other, CCB-2, covers the Crosby wire-rope clip, for fastening wire ropes securely.

The Climax Molybdenum Co., 500 Fifth Avenue, New York, announces that the first four sections of a new technical book, "Molybdenum in Cast Iron," are now available. These four sections cover molybdenum in gray iron. Those on malleable and white iron are to follow. The work is sent free to persons who would find it of practical value.

The Lufkin Line for the third quarter of 1937 maintains its reputation for the beauty of its pictures and the interest of its articles. The book, published by the Lufkin Foundry & Machine Co., Lufkin, Tex., contains just enough of text and illustration concerning the company's pumping units to make the reader want to know more about them.

The General Electric Co., Schenectady, N. Y., is mailing on request a bulletin on thrustor-operated valves for pipe sizes of 1 to 10 inches inclusive.

A folder from the Bethlehem Steel Co., Bethlehem, Pa., describes the company's A.P.I. normalized sucker-rod, made from selected bars and forged in pyrometrically controlled furnaces to insure proper forging temperatures, and then passed through successive forging dies constructed to give proper grain flow which will eliminate cold shuts and folds.

Engineering properties of "K" Monel are described in detail in a 16-page booklet sent on request by the International Nickel Co., Inc., 67 Wall Street, New York.

Circular A, published by the Geophysical Instrument Co., Washington, D. C., describes an electrical prospecting device for use in searching for oil and minerals.

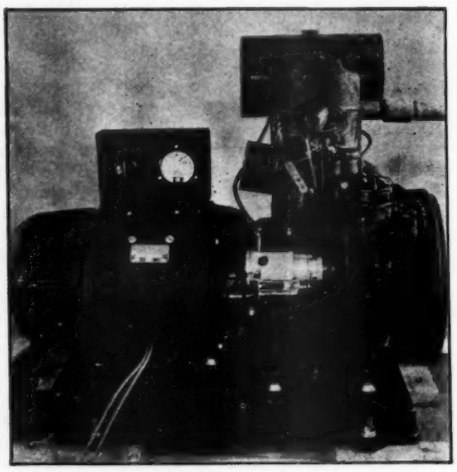
Hot-oil pumps are discussed in the August number of the News Letter, published by the Byron Jackson Co., Pump Division, Berkeley, Calif.

Silent Welding Construction

In construction of the Lincoln Electric Co.'s new factory addition in Cleveland, Ohio, 1,314 tons of steel has been erected in four weeks without a hammer thrust. The structure, containing 200,000 square feet, is a modern example of the silent building art, recognized recently in New York's new building code, which permits use of welding in building construction. The new two-story building employs the new welded rigid frame sawtooth design utilizing "tree-form" columns. The new-type structure, with modern exterior distinguished by continuous horizontal runs of glass block and sash, will obtain 100 per cent availability of space from floor to roof by elimination of all cross members and trusses.

Power Plant Is Designed for Use on Many Jobs in Oil Field

The General Power Co. of Quapaw, Okla., has been made distributor for the Pioneer Gen-E-Motor Corp. line of Gas-o-Lectric power plants. These



units being small, are designed for oil field drilling rigs, camps, work that requires portable floodlighting, and power stations.

The 110-volt A.C., 300-watt unit will operate from 12 to 16 hours on 1 gallon of gas. All units are equipped with automatic pushbutton starting. The engine is equipped with pulley to drive small machinery. The generator is mounted solidly to the crankcase of the engine. All units are combination A.C. and D.C., driven by gasoline engine. They are made in 300-, 600-, 1,000-, 1,500- and 1,800-watt sizes. Remote-control plants are available.

Pacific Pump in New Buildings

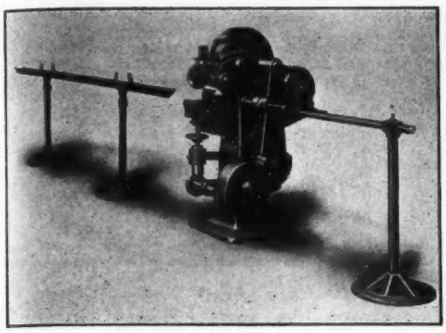
The new administration and factory buildings of the Pacific Pump Works, Huntington Park, Calif., are in use. They are across the street from the old plant, which will still be used. Sound-deadening, air-conditioning, etc., make the administration building one of the most modern in the oil equipment industry. The company makes turbine, centrifugal hot-oil and plunger pumps.

FOR SEISMOGRAPH WORK IN ARGENTINE OIL FIELDS

The equipment shown was shipped to Buenos Aires, Argentina, aboard the Steamship Del Norte from New Orleans, La., August 7. Manufactured in Tulsa by the Engineering Laboratories, Inc., it was supplied to the Seismograph Service Corp. for work in the Argentine government oil fields, known there as the Yacimientos Petroliferos Fiscales. The Seismograph Service Corp. sent J. L. Kezeler, observer, and R. P. Begley, shooter, from Tulsa, and F. B. Leedy, party chief, from San Fernando, Trinidad, where the company has two crews working. The equipment includes rotary shot-hole drill, drill-tender and water-truck, shooting-truck and recording-truck.

Feeding Pipe Into Machine All That Is Needed of Operator

The Geist Manufacturing Co., whose product is sold through the Landis Machine Co., Waynesboro,



Pa., has placed on the market a semiautomatic roller pipe-cutter. The operator is relieved of all duty other than feeding the pipe into the machine. The device incorporates many new features of design, the most noteworthy of which is the operation of the rollers by a cam action. Both the hand-lever and the foot-pedal have been eliminated. The movement of the rollers in a vertical plane is actuated by a gear-driven disc cam. Separate cams are necessary for standard wall and extra-heavy pipe.

The operating cycle is controlled through pick-off gears. The gear train is arranged so that by reversing one pair of gears, or employing an extra pair furnished as standard equipment, four different speeds are available. The speeds are fixed so that it is possible to cut off from 10 to 35 nipples per minute depending upon the pipe diameter. A removable cover protects the gear train.

The new Geist is equipped throughout with antifriction bearings, a heavy-duty roller bearing being used on the cutter-disc spindle to assume the thrust load of a heavy cut. A high-pressure greasing system is used to insure positive lubrication.

Another feature is the lubricator built into the machine for lubricating and cleaning the cutter-disc. The lubricator, adjustable for any diameter of disc, consists of a reservoir holding about 1 pint of oil. A needle valve controls the flow of oil, permitting just enough to flow into two felt pads which are in constant contact with the cutter-disc under spring tension. This insures positive and continuous lubrication.

Here and There With Men Who Manufacture Equipment

W. H. Eason, for years a field salesman for the W-K-M Co., Inc., Houston, Tex., has been transferred from Oklahoma to Kansas. His headquarters are at 901 Morton Street, Great Bend, Kans.

O. H. Attridge, Tulsa, chief engineer for the Lucey Products Corp., has been appointed to the manufacturers subcommittee of the rotary drilling equipment committee of the American Petroleum Institute. Mr. Attridge will serve as an alternate for W. S. Evans, New York, president of the Lucey Export Corp.

Four new distributors for tubular products of the Republic Steel Corp., Cleveland, Ohio, has been announced: Bluefield Supply Co., Bluefield, W. Va.; Ormand Plumbing Supply Co., San Antonio, Tex.; J. Gaber Co., Houston, Tex., and Morgan's, Inc., Savannah, Ga.

Seven promotions, including election of three new vice presidents, are announced by the Johns-Manville Products Corp. The new vice presidents are A. R. Fisher, J. P. Kottcamp and Alexander Cromwell. Mr. Fisher will be in charge of the Eastern district, Mr. Kottcamp of the Central, and Mr. Cromwell of the Pacific Coast. J. E. Begert has succeeded Mr. Fisher as manager of the Manville, N. J., plant. K. W. Huffine has been named to succeed Mr. Kottcamp as manager at Waukegan, Ill. H. J. O'Brien has become manager of the Alexandria, Ind., plant. W. Kelty succeeds Mr. Begert as head of the cost reduction department.

James W. McPhee has joined the Alexander Anderson division of the Lane-Wells Co. as sales engineer. Mr. McPhee has been connected with the oil industry and supply business about 15 years.

R. T. Lamb, H. T. Swortwood and W. A. Larson have changed the name of their company from Ideal Bailer Co. to Midco Bailer Co. Headquarters are at 1006 SE Twenty-ninth Street, Oklahoma City, Okla.

Reduces Shrinkage of Mortar

Shrinkage is a problem wherever brick mortar is used. Ordinarily shrinkage cannot be avoided because it results from the excess water that has to be used to make the mortar workable. As the mortar hardens and dries it contracts, pulling away from the joints, and hair checking. Mortite, developed by the Truscon Laboratories, Detroit, Mich., is a liquid which when added in small quantities to brick mortar makes it workable. The result is, the mason does not need so much water and there is less water to evaporate and cause shrinkage.

Vulcan Supertong Has Greater Strength Than Predecessor

J. H. Williams & Co., 75 Spring Street, New York, announces the Vulcan Supertong, a chain pipe-tong, drop-forged from alloy and high-tensile steel and heat-treated. Design and structural features are identical with those of Williams Vulcan tongs which have been in use for the past 40 years. The manufacturer states that Vulcan Supertongs have at least 50 per cent greater strength than

regular Vulcan tongs of corresponding size, without any increase in weight.

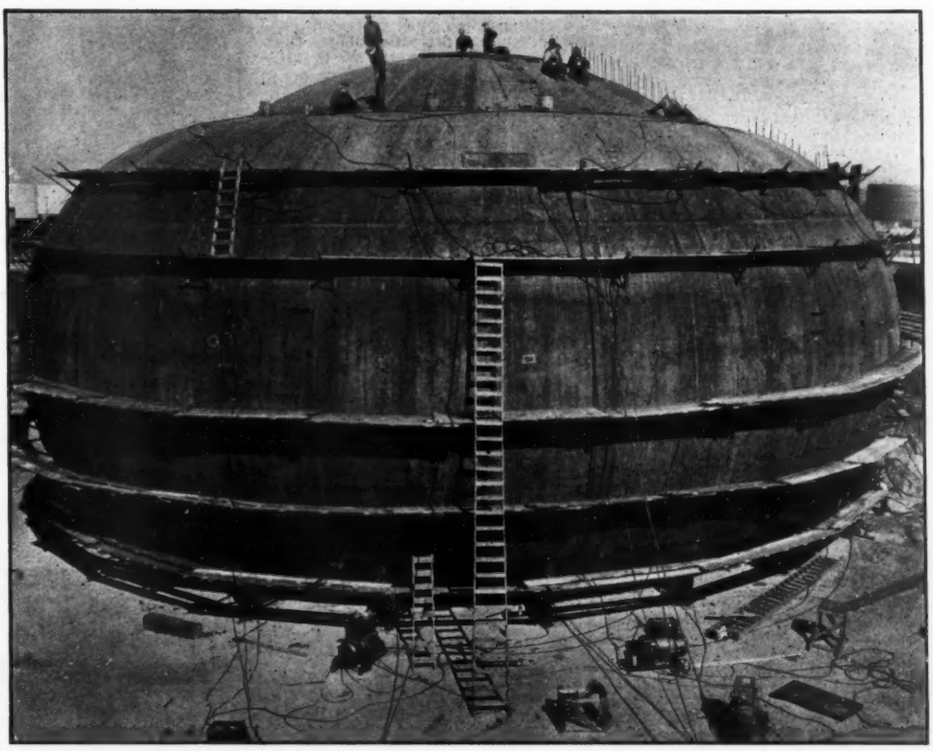
Vulcan Supertongs are equipped with Williams' new Superchain made from alloy steel, heat-treated and cadmium-plated, Superchains have increased strength to match the greater strength of Supertongs. Vulcan Supertongs are finished in gray enamel. Jaws have blue panel with bright-faced edges. There are eight sizes for pipe, one-eighth inch to 18 inches. Complete information will be furnished by the manufacturer.

News and comment relative to the International Petroleum Exposition, to be held in Tulsa May 14 to 21, 1938, are presented, along with interesting illustrations, in the second number of the Tulsa Oil Expositor. The publication is sponsored by the officers of the exposition, with Leslie Brooks, publicity director, as editor.

SINCLAIR COMPLETES FIRST OF TOMATO-TYPE TANKS

As part of a modernization program, the Sinclair Refining Co., East Chicago, Ind., has completed the first of several new-type gasoline storage tanks. Resembling a huge steel tomato, this

One of the most important considerations in determining the shape of the new tank, as well as the method of fabrication, was the fact that the structure, when completed, would be subjected to



tank is completely fabricated by arc welding. An idea of the welding involved can be gained from the fact that the tank is 92 feet in diameter and 47 feet 6 inches high, with a capacity of 40,000 bbls. of casinghead gasoline. Almost all of the welding was accomplished with General Electric single-operator arc-welding sets.

a working pressure of 15 pounds per square inch. Unless high pressure is maintained within the storage tank, the gasoline will boil out. This type of tank was chosen because it permits the use of tremendous internal pressures. The new tank was tested with a pressure of 17 pounds per square inch. One leak, easily repaired, was found.

Oil Man's Calendar

September

6-10—Rochester, N. Y., American Chemical Society.
7-8—Louisville, Ky., Kentucky Petroleum Marketers Association, Annual Fall Conference.
7-9—Glacier Park, Montana, National Bituminous Conference.
8-9—Charleston, W. Va., West Virginia Oil and Natural Gas Association.
13-16—San Francisco, Calif., North American Gasoline Tax Conference.
15-17—Atlantic City, National Petroleum Association, annual meeting, Hotel Traymore.
16-19—Taft, Calif., Pacific Oil Show and Black Gold Festival.
24-25—Traverse City, Mich., Michigan Petroleum Association.
29-30—Cleveland, Ohio, Ohio Petroleum Marketers Association, Fall Conference, Hotel Carter.

September—October

27-Oct. 1—Rochester, National Association of Petroleum Retailers, fifth national convention.
27-Oct. 1—Cleveland, Ohio, American Gas Association, nineteenth annual convention.
30-Oct. 1.—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

4-5—Chicago, Ill., National Lubricating Grease Institute, fifth annual convention, Blackstone Hotel.
5—Kilgore, Tex., East Texas Chapter, American Petroleum Institute.
7-8—Oklahoma City, fall meeting of Petroleum Division of A.I.M.E., Hotel Biltmore.
7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.
11-15—Kansas City, Mo.—Twenty-sixth National Safety Congress and Exposition.
11-16—Houston, Tex., Oil-World Exposition.
12-14—Chicago, Ill., National Oil Marketers Association Convention, Stevens Hotel.
14-16—Pittsburgh, Pa., mid-year meeting, American Association of Petroleum Geologists, William Penn Hotel.
14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.
18-22—Atlantic City, N. J., American Welding Society, Eighteenth Annual Meeting and Welding Exposition.
27-28—Indianapolis, Ind., Indiana Independent Petroleum Association, Annual Fall Convention, Hotel Severin.
28—New York, S.A.E. Annual Dinner, Commodore Hotel.
29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

October—November

27-Nov. 3—New York, National Automobile Show, Grand Central Palace.

November

8-12—Chicago, American Petroleum Institute, Eighteenth Annual Meeting, Stevens Hotel.
16—New York, Oil Trades Association of New York.

December

6—Memphis, Tenn., National Asphalt Congress.
6-11—New York, Exposition of Chemical Industries, Grand Central Palace.
8-10—Flint, Mich., S.A.E. National Production Meeting.

1938—March

16-18—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists, Roosevelt Hotel.

April

17-21—Dallas, Tex., American Chemical Society.

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Situations Wanted

CHEMIST-CHEM. ENGR. 10 years' experience major oil company refinery development and operation, particularly new lube processes. Interested in directing developments or operation. Address Box H-893, The Oil and Gas Journal, Tulsa, Oklahoma.

GEOLOGIST and Engineer having Field Dept. established in Stamford, Texas, for several years, wishes an eastern financial connection for the development of wildcat properties and proven and semiproven royalties and other worthy oil investments, in Jones, Throckmorton and Young counties. References will be furnished successful brokers, agents and operating company. Address reply to P. O. Box 547, Stamford, Texas.

METALLURGIST seeks connection with corporation having or desiring to organize metallurgical dept. Now employed in a large oil refinery. Mature, reliable and aggressive; technically trained, unusually qualified by experience in foundries, steel mills and other metallurgical plants. Can direct material and metal testing, standardization and specification. Address Box H-920, The Oil and Gas Journal, Tulsa, Okla.

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EXPERIENCED ACCOUNTANT, reliable and capable of managing office or doing detail work. Oil preferred. Good references. Will go out of town. Address Box H-931, The Oil and Gas Journal, Tulsa, Oklahoma.

Help Wanted

EXCEPTIONAL opportunity for salesman familiar with Drilling Mud trade and problems. Age 35 to 40. Permanent position. $250 to start. Box H-930, The Oil and Gas Journal, Tulsa, Oklahoma.

WANTED—Two salesmen to handle our Alloy Steel Bars, one for Texas and Oklahoma fields; one for Ohio, Indiana and North Central States.
KILBY CAR & FOUNDRY CO.,
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We have an opening for an experienced man to promote sale of cable tools direct to the user and through dealers. Must be fully conversant with the design and manufacture of drilling and fishing tools and have proven sales promotion ability. Give full particulars in writing to THE STAR DRILLING MACHINE COMPANY, Akron, Ohio.

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Royalties

WANTED—Deeded Land-Owners Non-Producing Royalties under lease to major company. Quote lowest cash price. CALIFORNIA LAND & INVESTMENT CO., 741½ So. Alvarado St., Los Angeles, Calif.

ROYALTIES FOR SALE in Wayne County, Illinois. Test well now drilling near. J. F. COMBS, Wayne City, Illinois.

REPRESENTATION WANTED for Calif. Oil Royalties. California Oil Syndicate, Inc., 1541 N. Western, Los Angeles, Calif.

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109 NEW oil fields and sands discovered in South Texas last 18 months. Royalties, leases or fee lands, close in or in trend carefully selected. Drilling blocks on structure. 20 years this area. M. E. BOGLE, Box 40, San Antonio, Texas.

ROYALTIES PURCHASING TRUST, LTD., Moorgate Hall, Moorgate London, E. C. 2., England, are buyers of producing oil royalties.

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This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

CLASSIFIED

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30
4 Lines	1.40	2.40	3.40	4.40
5 Lines	1.75	3.00	4.25	5.50
6 Lines	2.10	3.60	5.10	6.60
7 Lines	$2.45	$4.20	$5.95	$7.70
8 Lines	2.80	4.80	6.80	8.80
9 Lines	3.15	5.40	7.65	9.90
10 Lines	3.50	6.00	8.50	11.00

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma